REPORT RESUMES

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EXTENSION SERVICES, TELEVISION INSTRUCTION, AND RESEARCH IN VIRGINIA'S INSTITUTIONS OF HIGHER EDUCATION. STAFF REPORT NO. 7.

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VIRGINIA STATE EDUCATION STUDY COMMISSION, RICHMOND

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RECOMMENDATIONS ON VIRGINIA UNIVERSITY ACTIVITIES IN THE AREAS OF EXTENSION SERVICES, EDUCATIONAL TELEVISION, AND RESEARCH ARE PROPOSED. EXTENSION SERVICES (INCLUDING COMMUNITY AND TECHNICAL COLLEGES AND UNIVERSITY BRANCHES) NOW ADMINISTERED BY SPONSORING INSTITUTIONS, SHOULD BE COORDINATED AT THE STATE LEVEL. STATE CONTROLLED FOUR-YEAR INSTITUTIONS, ESPECIALLY THOSE LOCATED IN CITIES, SHOULD EXPAND THEIR ON-CAMPUS OFFERINGS DURING EVENINGS AND ON SATURDAYS. ALL NEW CLASSROOM BUILDINGS OUGHT TO BE EQUIPPED FOR THE TRANSMISSION AND RECEPTION OF TELEVISED INSTRUCTIONAL PROGRAMS, EITHER LIVE OR FROM VIDEOTAPES. VIRGINIA SHOULD CONTINUE TO COOPERATE WITH THE SOUTHERN REGIONAL EDUCATION BOARD IN ITS WORK RELATING TO OPEN CIRCUIT EDUCATIONAL TELEVISION. EACH STATE-CONTROLLED INSTITUTION SHOULD PROVIDE FUNDS FOR INSTITUTIONAL RESEARCH AND THOSE HAVING 3,000 STUDENTS OUGHT TO HAVE AT LEAST ONE FULL-TIME PROFESSIONAL PERSON RESPONSIBLE FOR COORDINATING RESEARCH. DEPARTMENTAL RESEARCH OUGHT NOT BE BLANKETED IN THE BUDGET WITH INSTRUCTION THROUGH AN OVERALL REDUCTION OF FACULTY TEACHING LOADS, BUT EACH INSTITUTION SHOULD DETERMINE A DESIRABLE TEACHING LOAD AND THEN ALLOT TO DESIGNATED FACULTY MEMBERS RELEASED TIME AND/OR GRANTS FOR RESEARCH. CEILINGS FOR TOP SALARIES SHOULD BE RAISED TO ATTRACT A FEW OUTSTANDING RESEARCH SCHOLARS. (DOCUMENT INCLUDES 15 TABLES AND A MAP.) (AJ)

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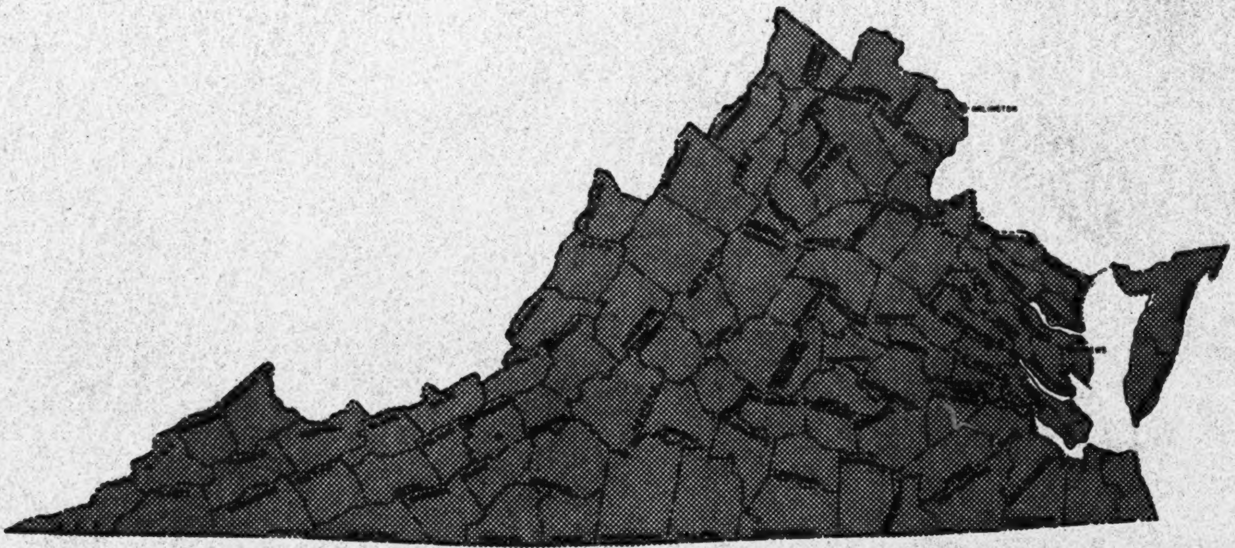
EXTENSION SERVICES, TELEVISION INSTRUCTION, AND RESEARCH IN VIRGINIA'S INSTITUTIONS OF HIGHER EDUCATION

Staff Report #7

VIRGINIA HIGHER EDUCATION STUDY COMMISSION



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RICHMOND, VIRGINIA
1965

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The following Staff Reports are published as a part of the Study of Higher Education in Virginia. Copies of the Reports may be requested from the State Council of Higher Education for Virginia, 10th Floor, Life Insurance Company of Virginia Building, 914 Capital Street, Richmond, Virginia, 23219

#1. Prospective College-age Population in Virginia, by Subregions 1960-1985
Lorin Thompson

#2. State-wide Pattern of Higher Education in Virginia
James R. Connor

#3. Geographical Origins of Students Attending College in Virginia
John Dale Russell

#4. The Two-year College in Virginia
A. J. Brumbaugh

#5. Instructional Programs in Virginia's Institutions of Higher Education
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#7. Extension Services, Television Instruction, and Research in Virginia's Institutions of Higher Education
Richard G. Browne

#8. The Faculties of Virginia's Colleges and Universities
R. Jan LeCroy, Richard G. Browne, and James R. Connor

#9. Library Services in Virginia's Institutions of Higher Education
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Staff Report # 7

EXTENSION SERVICES, TELEVISION INSTRUCTION, AND RESEARCH IN VIRGINIA'S INSTITUTIONS OF HIGHER EDUCATION

By

Richard G. Browne

THIS STAFF REPORT HAS BEEN REVIEWED BY THE HIGHER EDUCATION STUDY COMMISSION. THE RELEASE OF THIS REPORT DOES NOT IMPLY AN ENDORSEMENT BY THE COMMISSION OF ANY SUGGESTIONS AND RECOMMENDATIONS HEREIN CONTAINED.

RICHMOND, VIRGINIA
1965

FOREWORD

The Virginia General Assembly in 1964, under Senate Joint Resolution No. 30, authorized the Governor to appoint a Commission on Higher Education, and directed the Commission ". . . to undertake a comprehensive study and review of higher education, to be used as a basis for effective long-range planning as to objectives, needs, and resources of public and private higher education in the Commonwealth of Virginia." The members appointed to the Commission are listed on the title page of this volume. The Commission selected a staff for carrying on the Study and approved an outline of the topics to be covered. Several of these topics required the collection and interpretation of extensive data; the detailed analyses of the problems led, in many cases, to suggestions for their solution. The results of these detailed studies, prepared by staff members and consultants, are published as Staff Reports, to make the information generally available.

Staff Report #7, published herewith, is concerned with a group of three academic functions or activities--extension services, educational television, and research. The three topics are not closely related, but the treatment of each is relatively brief and the three are combined in this one Staff Report for purposes of publication. The topics covered in

Staff Report #7 more or less complete the review of the academic programs in the Virginia institutions, following the treatment of classroom instruction in Staff Report #5, INSTRUCTIONAL PROGRAMS IN INSTITUTIONS OF HIGHER EDUCATION IN VIRGINIA, and one specialized field in Staff Report #6, EDUCATIONAL PROGRAMS IN VIRGINIA FOR FIELDS RELATED TO HEALTH.

Data for Staff Report #7 were collected on forms sent to the Virginia institutions from the office of the Higher Education Study Commission. The first form, sent out to all institutions of higher education in the State, merely asked whether or not the functions or activities were maintained. To those institutions indicating that they did operate some extension services, or had facilities for educational television, or engaged in significant research programs, follow-up forms were sent requesting detailed information. The returns were tabulated by the staff of the Higher Education Study Commission. During visits by staff members and consultants of the Commission to the Virginia institutions, further inquiries and observations were made about the activities with which Staff Report #7 is concerned. The staff of the Higher Education Study Commission expresses its thanks to the institutional officials for the excellent cooperation extended in supplying information for this Report.

The tabulated data and the observations made during staff visits were turned over to Dr. Richard G. Browne, who has reviewed them and written Staff Report #7. Dr. Browne supplemented the information by a personal visit to one of the institutions and by telephone inquiries to others.

The author of Staff Report #7, Dr. Richard G. Browne, has recently retired as Executive Director of the Illinois Board of Higher Education, the coordinating agency for higher education in that State, with functions somewhat parallel to those of Virginia's State Council of Higher Education. Prior to his service with the Illinois Board of Higher Education, Dr. Browne had served for several years as Executive Officer of the Teachers College Board, which is the controlling board for four state universities in Illinois that were formerly teachers colleges. Dr. Browne has had broad experience as a professor and administrative officer in universities, and also in working on state-wide problems of higher education, not only in Illinois but also as a consultant to commissions studying higher education in several other states.

The text of Staff Report #7 presents only the findings and recommendations of the author, Dr. Browne. The Report has been reviewed by the Higher Education Study Commission, but the release of the Report does not imply an endorsement by the Commission of any suggestions and recommendations herein contained.

John Dale Russell
Director of the Study

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CHAPTER I

THE SCOPE OF THIS STUDY

Virginia's institutions of higher education are serving the State by performing many functions in addition to classroom instruction for resident students. By offering extension classes, correspondence courses, non-credit institutes, and general education for adults, the universities serve the instructional needs of citizens in all areas of the State. Through their research activities, the colleges and universities extend the frontiers of knowledge and contribute to the welfare of all people. This Report is concerned with some of these special services now being rendered by the Virginia institutions of higher education.

The specific topics which have been analyzed and which are reported in this summary are as follows:

1. Off campus (extension) courses
2. Extension centers, branches, community colleges
3. Evening and Saturday courses
4. Short courses and institutes
5. Correspondence study
6. Instruction by television

7. Research
    a. Institutional
    b. Departmental
    c. Sponsored

The over-all provisions made by Virginia's colleges and universities for these areas are shown in Tables 1 and 2. Table 1 deals with the first six of the topics listed above, and Table 2 with the other three. It will be noted, on the one hand, that many of the privately controlled colleges have relatively minor commitments in these areas. On the other hand, the state-controlled institutions are deeply involved in many of the areas with which this Report is concerned.

Each of the nine topics has been examined in some depth by the staff of the Higher Education Study Commission. Following visits to the various institutions of higher education by the members of the Commission's staff, and extensive discussion and correspondence with the appropriate persons, a series of inquiry forms were developed and sent to all four-year institutions of higher education in Virginia, both state- and privately controlled. Virtually all the colleges and universities, including all that are known to engage in the activities being studied, responded to the questionnaire. Supplementary questionnaires were sent to those engaged in any significant degree of extension activity

Table 1. EXTENSION SERVICES MAINTAINED AT ALL FOUR-YEAR VIRGINIA COLLEGES AND UNIVERSITIES, FALL 1964

Institution	Extension Services	Corres. Courses	Evening Classes	Centers away from Campus	Classes at locations other than Center	Television Courses	Short Courses	Conferences and Forums	Labor Ind. Programs	Other
State-controlled										
The College of William & Mary	yes	no	yes	yes	yes	yes	yes	no	no	no
Longwood College	no	no	no	no	no	no	no	no	no	no
Madison College	no	no	no	no	no	no	no	no	no	no
Mary Washington College	no	no	no	no	no	no	no	no	no	no
Medical College of Virginia	yes	no	no	no	no	no	yes	yes	no	yes[a]
Old Dominion College	yes	no	yes	no	yes	no	yes	yes	no	yes[b]
Radford College	no	no	no	no	no	no	no	no	no	no
Richmond Professional Inst.	yes	no	yes	no	yes	yes	yes	yes	no	no
University of Virginia	yes	yes	yes	yes	yes	no	yes	yes	no	no
Virginia Military Institute	yes	no	no	no	no	no	yes	yes	no	no
Virginia Polytechnic Institute	yes	no	yes	no	yes	no	yes	yes	yes	no
Virginia State College-Pet'g.	yes	yes	yes	yes	yes	no	yes	yes	no	yes[c]
Virginia State College-Norf.	yes	no	yes	no	yes	no	yes	yes	no	no
Privately Controlled										
Bridgewater College	no	no	no	no	no	no	no	no	no	no
Eastern Mennonite College	yes	yes	yes	yes	no	no	no	no	no	no
Emory and Henry College	no	no	no	no	no	no	no	no	no	no
Frederick College	no	no	no	no	no	no	no	no	no	no
Hampden-Sydney College	no	no	no	no	no	no	no	no	no	no
Hampton Institute	no	no	no	no	no	no	no	no	no	no
Hollins College	no	no	no	no	no	no	no	no	no	no
Institute of Textile Technology	no	no	no	no	no	no	no	no	no	no
Lynchburg College	no	no	no	no	no	no	no	no	no	no
Mary Baldwin College	no	no	no	no	no	no	no	no	no	no
Presbyterian School of Christian Education	no	no	no	no	no	no	no	no	no	no
Randolph-Macon College	no	no	no	no	no	no	no	no	no	no[d]
Randolph-Macon Women's Col.	no	no	no	no	no	no	no	no	no	no
Roanoke College	yes	no	yes	no	no	no	yes	no	no	no
St. Paul's College	no	no	no	no	no	no	no	no	no	no
Sweet Briar College	no	no	no	no	no	no	no	no	no	no
University of Richmond	yes	no	yes	yes	no	yes	yes	yes	yes	no
Virginia Union University	yes	no	yes	no	no	no	no	yes	no	no
Washington and Lee Univ.	no	no	no	no	no	no	no	no	no	no

[a] Hospital Law and Legal Medicine

[b] Adult Education

[c] School Consultant

[d] High School Level Courses in 1965-66 only

Table 2. RESEARCH PROGRAMS IN THE FOUR-YEAR VIRGINIA INSTITUTIONS OF HIGHER EDUCATION, 1964-65

Institution	Institutional Research	Departmental Research	Sponsored Research
Four-year State-controlled			
The College of William & Mary	No	Yes	Yes
Longwood College	No	Yes	Yes
Madison College	No	Yes	Yes
Mary Washington College	No	No	Yes
Medical College of Virginia	No	No	Yes
Old Dominion College	No	Yes	Yes
Radford College	No	No	Yes
Richmond Professional Institute	Information Not Available		
University of Virginia	Yes	Yes	Yes
Virginia Military Institute	Yes	No	No
Virginia Polytechnic Institute	Yes	Yes	Yes
Virginia State College-Petersburg	Yes	Yes	Yes
Virginia State College-Norfolk	Yes	Yes	Yes
Four-year Privately Controlled			
Bridgewater College	No	Yes	Yes
Eastern Mennonite College	No	Yes	Yes
Emory & Henry College	No	No	No
Frederick College	No	No	No
Hampden-Sydney College	Information Not Available		
Hampton Institute	Information Not Available		
Hollins College	Information Not Available		
Institute of Textile Technology	Yes	Yes	Yes
Lynchburg College	Information Not Available		
Mary Baldwin College	No	Yes	No
Presbyterian School of Christian Education	No	No	No
Randolph Macon College	No	No	No
Randolph Macon Woman's College	Yes	Yes	Yes
Roanoke College	No	Yes	Yes
Saint Paul's College	No	No	No
Sweet Briar College	No	Yes	No
University of Richmond	No	Yes	Yes
Virginia Union University	No	No	No
Washington & Lee University	Information Not Available		

or a substantial program of research or other special services. These supplementary questionnaires provided considerable detail and were a valuable source of specific and precise information. In cases where the information provided by the college or university was incomplete or not entirely clear, the staff of the Study corresponded further with the proper authorities to maximize the accuracy and usefulness of the data.

The data reported on the questionnaires were analyzed and tabulated, and the information carefully studied. The most important of the tabulations are reproduced in this Report. The analysis presented in this Report follows a slightly different scheme of classification than that used in the questionnaire, in order to promote clarity.

The Study did not concern itself to any great extent with the well-known Cooperative Extension Service operated by land-grant institutions under Federal legislation. These services, chiefly in agriculture and home economics, operate under Acts of Congress and receive substantial financial support from the Federal government, as well as from State and local sources. They provide instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in colleges. They do this by field demonstrations, non-credit classes, publications, special projects, and a variety of other methods. The Cooperative Extension Service operates in every county of the State. It has been considered to be one of the most successful extension programs ever provided.

Furthermore, this report does not seek to deal with the internal organization of the extension services and allied programs within each institution. Here there is great variation from one college to another. Even the titles of the administrators are not uniform. There may be a Dean (or Director) of Extension (or off-Campus Services or School of General Studies), a separate Dean (or Director) of the Evening College (or School), along with a separate Dean (or President or Chancellor) of off-campus extension centers, branches, and university-operated "community colleges." Or these activities may be consolidated into one or more administrative units. It is likely that each institution has structured its administrative organization to meet its special requirements, or the personal qualifications of its staff members. In any case, there exists a complexity which seems to fall outside the scope of the present Study.

Finally the survey staff has not sought to make extensive comparisons with the situation in other states. Each state, including Virginia, is unique and must examine its own needs and resources and weigh the possible improvements in a thoughtful but independent manner. Some notion, however, of what other states have accomplished is often useful in considering the directions which Virginia may take in strengthing its programs. The Commission's staff has given special attention to the studies of the Southern Regional Education Board and the accomplishments of its member states.

Following the analysis of each of the nine areas listed above, this Report summarizes in one section possible courses of action that may be indicated from the analysis of the reports.

CHAPTER II

OFF-CAMPUS COURSES

The need for continuing education is very extensive in Virginia, as in other states. The rapidly changing character of society, the recent explosion of knowledge, and the shifting requirements resulting from technological changes, have all contributed to the need for a great expansion of provision for the continuing education of adults.

One general measure of this need can be shown by the census data on the number of school years completed by the adult population. Almost two-fifths of the adults in the United States in the 1960 U. S. Census count had no formal education beyond the eighth grade. In Virginia 45 per cent of the adults were in this category.

Tables 3 and 4 give the data from the 1960 Census of Population. Table 3 indicates that white females in Virginia show a slightly higher level of formal schooling than those in the United States as a whole but that Virginia lags in all other population classifications. In the case of the non-white adults, Virginia's deficiency is one full year of schooling. These tables suggest a need for a considerable commitment to continuing education for adults, as well as vigorous measures to strengthen the educational system at all levels. Extension courses constitute one method of achieving this goal.

Table 3. MEDIAN SCHOOL YEARS COMPLETED BY PERSONS 25 YEARS OLD AND OVER, 1960[a]

	Virginia	United States
All Persons	9.9	10.6
Male	9.2	10.3
Female	10.5	10.7
White Persons	10.8	10.9
Male	10.2	10.7
Female	11.4	11.2
Non-white Persons	7.2	8.2
Male	6.5	7.9
Female	7.6	8.5

[a] Sources: 1. 1960 Census of Population, Volume I, Characteristics of the Population, Part 48, Virginia, Table 47
2. Statistical Abstract of the United States, 1964, page 113

Table 4. PERCENTAGE DISTRIBUTION OF PERSONS 25 YEARS OLD AND OLDER BY YEARS OF SCHOOL COMPLETED, 1960 [a]

	All Persons		White Persons		Non-White Persons	
	Va.	U. S.	Va.	U. S.	Va.	U. S.
4 years or less	13.2	8.3	9.3	6.7	29.4	23.5
5 - 7 years	23.1	13.9	21.3	12.7	31.1	23.3
8 years	8.6	17.5	8.6	18.1	8.3	12.8
9 - 11 years	17.2	19.2	17.8	19.3	14.9	18.7
12 years	20.7	24.6	23.3	25.8	9.9	13.8
13 - 15 years	8.8	8.8	10.1	9.3	3.2	4.4
16 or more years	8.4	7.7	9.6	8.1	3.2	3.5
	100.0	100.0	100.0	100.0	100.0	100.0

[a] Source: 1960 Census of Population, Volume I, Characteristics of the Population, Part 48, Virginia, Table 47.
Statistical Abstract of the United States, 1964, Page 113.

Extension Courses

A basic conclusion from the study of the extension activities carried on by the Virginia institutions of higher education is that there have been serious and successful attempts to meet the needs of the people, not only on the basis of desired instructional content but also on the basis of geographical accessibility. In 1964-65, Virginia colleges and universities offered over 1,250 courses in some 125 locations in the Commonwealth. Most of these are in addition to the numerous offerings in organized extension centers and in the evening programs of the various institutions. With some 1,500 courses taught in extension centers, approximately 1,250 extension courses elsewhere than in organized centers, and about 900 in evening and Saturday classes on campus, Virginia's institutions of higher education offered some 3,650 courses for students not regularly enrolled as day students on the parent campuses. Furthermore these courses were offered in numerous locations throughout the State. Table 5 indicates the scope of some of these offerings, classified by subject-matter fields, by each state-controlled institution. It will be seen that there was heavy demand for courses related to employment--business-economics, education, and engineering--but less demand for courses in art, languages, and the social sciences, which contribute chiefly to the cultural and civic attributes. Science courses were also less numerous, probably because of

Table 5. COURSES TAUGHT IN OFF-CAMPUS CLASSES OTHER THAN ORGANIZED EXTENSION CENTERS, 1964-65

Department	Univ. of Va.		Old Dominion		Va. St., Pet'g.		Va. Poly. Inst.		Wm. & Mary		Rich. Prof.		All Colleges	
	Courses	Enroll-ment	Courses	Enroll-ment	Courses	Enroll-ment	Courses	Enroll-ment	Courses	Enroll-ment	Courses	Enroll-ment	Courses	Enroll-ment
Agriculture	-	-	-	-	-	-	2	40	-	-	-	-	2	40
Art and Music	47	723	-	-	6	142	-	-	2	42	-	-	55	907
Business-Econ.	112	1,900	3	72	2	53	1	20	33	697	2	32	153	2,774
Education	223	2,461	-	-	19	344	7	117	97	1,989	2	26	348	4,937
Engineering	117	1,990	-	-	-	-	5	80	-	-	-	-	122	2,070
English	127	2,847	4	52	2	74	-	-	24	566	1	8	158	3,547
History and Gov't.	106	2,222	1	13	1	17	-	-	14	340	-	-	122	2,592
Home Economics	-	-	-	-	-	-	1	19	-	-	-	-	1	19
Languages	44	615	-	-	2	54	-	-	11	172	-	-	57	841
Law	2	39	-	-	-	-	-	-	-	-	-	-	2	39
Mathematics	65	1,089	2	26	29	615	2	40	19	386	-	-	117	2,156
Medicine and Health	1	38	-	-	-	-	-	-	-	-	-	-	1	38
Science	38	624	-	-	-	-	9	180	2	27	-	-	49	831
Social Science	55	1,350	-	-	8	81	-	-	4	84	4	94	71	1,609
General	9	137	-	-	-	-	-	-	1	23	-	-	10	160
Totals	946	16,035	10	163	69	1,380	27	496	207	4,326	9	160	1,268	22,560

the need for laboratory facilities for instruction.

There is no doubt that some gaps exist in the extension offerings. It is not always possible to secure a qualified instructor to go to a particular locality where a given course is requested. In addition, the requests in some localities are often dispersed so widely among the various subjects that too few students would enroll for a specific course. Though 100 persons may wish an extension course, if their desires are divided among 20 or 30 different courses, no one course will likely have sufficient enrollment to justify its being offered, so some gaps will always persist. Correspondence courses and educational television may serve such scattered needs.

In general, extension courses do not have quite the same academic standing as courses taken in residence on the main campus. Institutions feel free to offer in extension programs courses in many subjects that are not offered on the main campus. Non-credit courses for adult education, catering to the leisure-time interests of mature people, are often a part of the offering of extension classes. Entrance requirements are often minimal for those taking credit courses in extension.

It is quite customary for institutions to limit the amount of credit earned in extension classes that can be counted toward a degree; the limitations tend to be rather strict for graduate degrees. Such limitations are justified on the theoretical grounds that facilities at the location where extension classes are given are not equal to those on the main campus.

This may be particularly true for library resources and for the laboratory teaching of science. Carefully organized research studies of the measurable accomplishment of students fail to support the hypothesis that the quality of instruction in extension classes is inferior to that on the campus. Disregarding such research, institutions continue to discriminate against extension course credits in their degree requirements.

The fact that credits for courses taken in extension may not be accepted at face value when transferred to the main campus for degree purposes sometimes results in serious disappointment for students who have not been properly advised in taking extension classes. Considerable resentment is engendered when the student finds that, after investing his time and effort and money in one or more extension courses and completing the courses successfully, the parent institution will not recognize his hard earned credits toward a degree. Such credits, however, are usually acceptable for other purposes, such as the meeting of requirements for teacher certification or the civil service educational requirements for a position.

Extension "Centers"

It is not possible to state precisely what extension "centers" have been established in Virginia, in the absence of a clear and uniform definition of the term. The confusion over terms becomes evident in the description of the patterns of "centers" that have been developed.

The University of Virginia reported that it operates extension centers at Roanoke (153 courses in 1964-65), at Lynchburg (78 courses), and at Madison (17 courses). But it also reported 66 courses at seven locations in the "Richmond Center." Thirty-seven of these were offered at Fort Lee and 21 at Richmond, with others at Colonial Heights, Petersburg, Powhatan, West Point, and in Henrico County.

The "Northern Virginia Center" of the University of Virginia reported 317 courses, of which 270 were in Arlington, 16 in Fairfax, 10 in Falls Church, 6 in Fort Meyer, 3 each in Alexandria and Fort Belvoir, and others in Manassas, Leesburg, Groveton, Purcellville, McLean, and Vienna.

The University of Virginia also reported a "Southwest Center," with 14 courses at Abingdon and others at Richlands, Lebanon, Wise, Big Stone Gap, Clintwood, Bristol, Honaker, Tazewell, Grundy, and Appalachia, to a total of 32. A "Central Virginia Center" offered 64 courses with 24 at Waynesboro, 9 at Quantico, 5 at Fredericksburg, 4 at Winchester, and such other locations as Staunton, Front Royal, and Madison.

At the "Hampton Roads Center" the University of Virginia offers a total of 120 courses with substantial numbers of classes at Norfolk, Langley Field, Fort Eustis, Virginia Beach, and Wallops Island (the University also operates a branch "Community College" at Wallops

Island). The University of Virginia's "center" at Roanoke includes courses at 16 other cities in addition to Roanoke.

These groupings appear to be in the nature of devices for administrative convenience. They are not true "centers" in the sense of provision for higher education in a single location. (The operations at Arlington, Norfolk, and Roanoke are extensive enough to merit the term, except that they are administered as a part of a broader geographical, regional entity.) And it is difficult to consider courses offered at 19 locations, some of which are 100 miles distant from others, as constituting a "center." These are regional groupings of scattered extension courses.

The complexity and imprecise nature of these classifications was reflected in the reporting for this Study. In Staff Report #2 of the Virginia Higher Education Study Commission, Appendix B, the University of Virginia is listed as having ten "off-campus Extension Centers," located at Abingdon, Norfolk, Martinsville, Arlington, Richmond, Roanoke, Wallops Island, Lynchburg, Madison, and Waynesboro-Staunton. In some cases these are the location of the headquarters for field offices serving a large area. In three cases they are related in some fashion to a branch or "community college" operated by the University of Virginia. The Virginia Polytechnic Institute lists four extension centers, all of which are connected with its two-year branches. The College of William and

Mary lists five extension centers, none of which is a part of either of its two-year branches. At these centers The College of William and Mary taught a total of 177 courses, almost a third of them at the Langley Air Force Base.

Possibilities of Duplication

The state-controlled colleges and universities in Virginia are free to set up an extension class or program of such classes at any location in the State where they consider such services advisable. No specific approval from any state authority outside the institution itself is required for the setting up of an extension class or a series of such classes. The chief deterent to an over-proliferation of extension courses is financial, for the total program, except for overhead administrative services, must be supported by income from the fees paid by students in the classes.

A given institution can start extension classes in a certain community even though some other institution is already giving extension classes there or even though the community has an established college or university either state- or privately controlled. The situation naturally leads to the suspicion that there may be considerable duplication and overlapping in the extension services of the different state-controlled institutions throughout the State. For this reason a special analysis has been undertaken of the locations where the possibility of such duplication exists.

Table 6 shows every location in Virginia where two or more state-controlled institutions maintained extension classes in 1964-65, or where one such institution taught extension classes if an established institution of higher education is also located in that community.

Table 6 lists 52 locations in Virginia where in 1964-65 a possibility existed for local duplication between extension classes of two or more state-controlled institutions or between extension services of one institution and one or more established colleges or universities in the same community. Five different state-controlled institutions of higher education maintained extension classes in Norfolk where Old Dominion College and Virginia State College, Norfolk Division, are also located. In Richmond four state-controlled institutions maintained extension classes; in Richmond are located two state-controlled and several privately controlled institutions. In Courtland three different state-controlled institutions maintained extension classes--Virginia Polytechnic Institute, Virginia State College at Petersburg, and The College of William and Mary--but a total of only five extension classes were taught in Courtland by the three institutions in 1964-65.

There were 27 locations where two state-controlled institutions independently maintained extension classes in 1964-65 but in only five of these locations was any substantial number of courses provided. One of the five was Abingdon where a total of 15 extension courses were offered by the University of Virginia and Virginia Polytechnic Institute.

Table 6. LOCATIONS IN VIRGINIA WHERE TWO OR MORE STATE-CONTROLLED INSTITUTIONS HELD EXTENSION CLASSES IN 1964-65, OR WHERE ONE SUCH INSTITUTION HELD EXTENSION CLASSES IF ONE OR MORE ESTABLISHED COLLEGES IS LOCATED IN THE SAME COMMUNITY

	Extension Classes Offered		Number of Established Institutions at the Same Location			
				State-controlled		Privately Controlled College
Location	Number	Institutions That Offer Extension Classes	Extension Center of:	4-yr. Coll.	2-yr. Coll.	
Abingdon	15	Univ. of Va. Va. Poly. Inst.	-	-	-	-
Accomac	2	Wm. & Mary Va. St., Pet'g.	-	-	-	-
Alexandria	3	Univ. of Va.	-	-	-	1
Arlington	270	Univ. of Va.	-	-	-	1
Ashland	1	Va. St., Pet'g.	Wm. & Mary	-	-	1
Blacksburg	2	Univ. of Va.	-	1	-	-
Boydton	4	Univ. of Va. Va. St., Pet'g.	-	-	-	-
Bristol	1	Univ. of Va.	-	-	-	2
Charlotte Courthouse	2	Univ. of Va. Va. St., Pet'g.	-	-	-	-
Charlottesville	1	Va. St., Pet'g.	-	1	-	1
Chatham	3	Univ. of Va. Va. St., Pet'g.	-	-	-	-
Colonial Heights	2	Univ. of Va.	Wm. & Mary	-	-	-
Courtland	5	Va. Poly. Inst. Va. St., Pet'g. Wm. & Mary	-	-	-	-
Covington	4	Univ. of Va. Va. Poly. Inst.	-	-	-	-
Culpepper	3	Univ. of Va. Va. St., Pet'g.	-	-	-	-
Danville	24	Univ. of Va. Va. Poly. Inst.	-	-	1	2
Emporia	3	Wm. & Mary Va. St., Pet'g.	-	-	-	-
Exmore	2	Wm. & Mary Va. St., Pet'g.	-	-	-	-
Fairfax	19	Univ. of Va. Wm. & Mary	-	-	1	-
Farmville	6	Va. St., Pet'g.	-	1	-	-
Fishersville	3	Univ. of Va. Va. Poly. Inst.	-	-	-	-
Fort Eustis	15	Univ. of Va.	Wm. & Mary	-	-	-
Fort Lee	37	Univ. of Va.	Wm. & Mary	-	-	-
Franklin	5	Wm. & Mary Va. St., Pet'g.	-	-	-	-
Fredericksburg	5	Univ. of Va.	-	1	-	-

Table 6. CONTINUED

	Extension Classes Offered		Number of Established Institutions at the Same Location			
				State-controlled		Privately Controlled Colleges
Location	Number	Institutions That Offer Extension Classes	Extension Center of:	4-yr. Coll.	2-yr. Coll.	
Gretna	3	Univ. of Va. Va. St., Pet'g.	-	-	-	-
Halifax	3	Univ. of Va. Va. St., Pet'g.	-	-	-	-
Hampton	4	Univ. of Va. Va. St., Pet'g.	Wm. & Mary	-	-	1
Henrico County	2	Univ. of Va.	Wm. & Mary	-	-	-
Langley A. F. B.	43	Univ. of Va. Va. Poly. Inst.	Wm. & Mary	-	-	-
Lawrenceville	2	Va. St., Pet'g.	-	-	-	1
Lexington	3	Univ. of Va.	-	1	-	1
Lynchburg	1	Va. Poly. Inst.	Univ. of Va.	-	1	3
Madison	2	Univ. of Va.	Univ. of Va.	1	-	-
Marion	2	Univ. of Va. Va. Poly. Inst.	-	-	-	1
Martinsville	1	Univ. of Va.	-	-	1	-
McLean	2	Univ. of Va. Wm. & Mary	-	-	-	-
Newport News	5	Univ. of Va. Va. St., Pet'g.	Wm. & Mary	-	1	-
Norfolk	78	Univ. of Va. Va. Poly. Inst. Old Dominion Va. St., Pet'g. Rich. Prof.	Wm. & Mary	2	-	-
Petersburg	3	Univ. of Va. Va. St., Pet'g.	-	1	1	-
Portsmouth	6	Univ. of Va. Va. St., Pet'g.	Wm. & Mary	-	-	1
Richmond	36	Univ. of Va. Va. Poly. Inst. Va. St., Pet'g. Rich. Prof.	-	2	-	4
Roanoke	38	Univ. of Va. Va. Poly. Inst.	Univ. of Va.	-	1	2
Smithfield	3	Univ. of Va. Va. St., Pet'g.	-	-	-	-
Staunton	3	Univ. of Va.	-	-	-	1
Suffolk	5	Wm. & Mary Va. St., Pet'g.	-	-	-	-
Tappahannock	3	Wm. & Mary Va. St., Pet'g.	-	-	-	-
Virginia Beach	9	Univ. of Va.	Wm. & Mary	-	-	-
Wallops Island	7	Univ. of Va.	-	-	1	-
Winchester	4	Univ. of Va.	-	-	-	1
Wise	4	Univ. of Va. Va. Poly. Inst.	-	-	1	-
Wytheville	2	Univ. of Va.	-	-	1	-

Another location was Danville where 24 extension courses were offered by the University of Virginia and Virginia Polytechnic Institute; Danville is also the location of a "community college" branch of the Virginia Polytechnic Institute, and of two privately controlled junior colleges. In Fairfax 19 extension courses were offered by The College of William and Mary and the University of Virginia; also located at Fairfax is George Mason College, a two-year branch of the University of Virginia. At Langley Air Force Base the total of 43 extension courses were offered by the University of Virginia and Virginia Polytechnic Institute; in addition The College of William and Mary maintains an "extension center" there, which offered 52 courses. Finally at Roanoke 38 extension classes were offered by the University of Virginia and Virginia Polytechnic Institute. In addition the University of Virginia maintains an organized extension center in Roanoke which offered 153 courses, and Virginia Polytechnic Institute maintains a two-year branch known as Roanoke Technical Institute; two privately controlled four-year liberal arts colleges are also located nearby, Roanoke College and Hollins College.

The only other locations where as many as 10 extension classes were offered were Fort Eustis and Fort Lee. At Fort Eustis the University of Virginia offered 15 courses and The College of William and Mary offered 7 courses there in its extension center. At Fort Lee the University of Virginia offered 37 courses and The College of William and

Mary offered 15 there in its extension center.

The fact that two or more institutions offer extension courses in the same location does not in itself prove that objectionable duplication exists. The courses may be in different subjects, or they may be at different levels (undergraduate or graduate), or all the classes even in the same subjects and at the same level may have had sufficient enrollments to warrant an economical operation. In such circumstances there can be no criticism about "duplication". In order to examine the situation further a careful analysis was made of all extension class titles and enrollments reported from each location where the extension courses were offered that might have involved duplication. Out of a total of some 1, 100 classes for which reports were examined, the only instances in which objectionable duplication could possibly be charged were the following:

In Norfolk, the University of Virginia taught two classes of lower division courses in American History, each with 14 students enrolled; The College of William and Mary taught one lower division course in American History with 14 students enrolled.

In Norfolk, the University of Virginia taught one graduate course in Theory and Practice of Guidance, with 18 students enrolled; Richmond Professional Institute taught one graduate class in Advanced Vocational and Educational Guidance, with 9 students enrolled.

In Richmond, Virginia State College-Petersburg taught one upper division class in Beginning Stenography with 12 students enrolled; Richmond Professional Institute in its Evening Division taught 3 classes in Elementary Shorthand, with enrollments ranging from 7 to 18.

In Richmond, Virginia State College-Petersburg taught one graduate class in Human Growth and Development, with 9 students enrolled; Richmond Professional Institute in its Evening Division taught one graduate class in Human Growth and Development with 32 students enrolled.

In Richmond, the University of Virginia taught one class at the graduate level in Theory and Practice of Guidance, with 10 students enrolled; Richmond Professional Institute in its Evening Division taught one graduate course in Guidance and Testing, with 12 students enrolled.

In these five instances it would be necessary to have more information than is presently available about each course in order to make certain that adverse criticism of duplication is warranted. These five instances, it should be noted, involve only the possible duplication between extension offerings in the same locality by two different state-controlled institutions. The possible duplication that may exist between extension course offerings and the campus courses offered by established institutions in the same locality have not been investigated, for lack of time; this would have involved a detailed analysis of several thousand courses. It would also have been necessary to identify each suspected case of such duplication with respect to the days and hours and semester or term when the courses were scheduled. For example an extension class given second semester on Tuesday and Thursday evenings at 7:00 would not be an objectionable duplication of the same course given in the same locality in the regular campus program of an established college at 9:00 a. m. Mondays, Wednesdays, and Fridays during the first semester.

Even if objectionable duplication between two extension classes were shown, it could not be criticized adversely on the grounds of waste of public funds, for the students, not the State, pay for the services. There is possibly some waste of faculty manpower in duplicating courses at a given location, but this is a matter which the institutions themselves can be expected to look after. Perhaps the chief objection to the present uncontrolled pattern of extension class offerings is the opportunity for "empire building" that it fosters. An institution, in its commendable eagerness to serve the needs of the State, may be tempted to start extension classes in a territory where the needed instruction is already provided by existing extension programs or locally based institutions of higher education.

Community Colleges, University Branches, and Extension Centers

One of the most intricate and controversial aspects of college and university expansion, in Virginia and elsewhere, concerns the procedures in establishing new locations for college work. The rapid increase in recent years in college-age youth, and the even greater increase in college enrollments, have given new urgency to this problem. (See Staff Report #4).

A community college, (frequently called a junior college), may be defined as a two-year collegiate institution with some degree of local control and support. The comprehensive community college is one that offers all or most of these distinctive programs: (1) college parallel or transfer, (2) terminal general education, (3) technical, semi-technical, and other occupationally oriented programs, and (4) adult education. It provides varied programs for a heterogeneous population, including high school drop-outs, high school graduates in need of remedial instruction, as well as academically gifted students. Through its varied programs it can maintain an open-door admission policy. It generally charges low or no tuition. Virginia does not at present have any institutions which fit this description. (For a full discussion of the two-year colleges in Virginia see Staff Report #4).

University branches are collegiate institutions which are operated by a college or university at a location some distance from the parent campus. They may be two-year or four-year branches or even graduate-level institutions. Virginia has two four-year and eleven two-year institutions of this nature. One of the four-year branches is Mary Washington College of the University of Virginia located in Fredericksburg. The other is the branch of Virginia State College, located in Norfolk. Of the two-year colleges, five are branches of the University of Virginia, four of Virginia Polytechnic Institute, and two of The College of William and Mary. Eight of the 11 two-year branches are supported by specific state appropriations varying from $50,400 to $270,500 of state tax funds during the current biennium. The total tax funds appropriated for 1964-66 are $1,136,840. This is supplemented by $1,794,460 appropriated from student tuition and fees. Three institutions, all recently established by the University of Virginia, do not have specific appropriations for their operation.[1]

Extension centers exist where a college or university provides a large enough cluster of courses in a given city, or in a region of the State, to establish an administrative structure there. As previously indicated, the University of Virginia has an organized center at Roanoke where 155 courses were taught (in 1964-65); the University also has organized centers at Madison and at Lynchburg. The College of William and Mary reports these organized centers:

Lower Peninsula Extension Center-Hampton
Princess Anne Extension Center-Virginia Beach
Portsmouth-Norfolk Extension Center
Hopewell-Petersburg Extension Center
Richmond-Henrico Extension Center

The Virginia Polytechnic Institute did not report any extension centers but did report offering 21 courses at the "Roanoke Technical Institute" which it operates.

There are in addition a number of other locations where the universities offer a substantial cluster of courses but which are not (yet) designated as organized centers. The University of Virginia offered, in 1964-65, 23 courses at Danville, 37 at Fort Lee, 21 at Richmond, 270 at Arlington, 24 at Waynesboro, 51 at Norfolk, 38 at Roanoke; Virginia Polytechnic Institute offered 15 courses at Langley Air Force Base.

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[1] It should be noted that the State also appropriated $3,000,000 during this biennium to "expand and improve vocational-technical training."

In some of the cases mentioned above it is likely that the respective university will ultimately designate some locations as organized extension centers and provide personnel and facilities to operate them. The sequence of development seems sometimes to run as follows:

1. A university is asked to conduct one or more extension classes in a new location.
2. The number of offerings increases to a substantial cluster.
3. The location is designated as an organized extension center with some permanent staff and physical facilities.
4. The extension center becomes a two-year branch; advanced courses may be continued by the parent institution on an extension basis, but not as a part of the two-year branch.
5. The two-year branch is allowed by the parent institution to offer third year courses in some subjects.
6. There is pressure, usually successful ultimately, to convert the branch to a four-year program.
7. The four-year branch becomes an independent state institution, with its own board of control.

At some stage in this development, generally at the end of the third step or the beginning of the fourth, state recognition and a separate state appropriation are secured.

The stages shade almost imperceptibly into one another, and the

State has another full-blown college almost before it realizes what has happened. The State may be faced with a fait accompli and feel obliged to provide support, even though the previous decisions have been made by the institution without consulting state authorities. This is not to suggest that the universities have taken any steps which were not in good faith and fully justifiable. But the effect of the procedure is likely to produce undesirable confusion and unnecessary disarray in the State's system of higher education.

Two relatively simple proposals would alleviate any danger. One is the establishment of the State Board of Community Colleges and Technical Education proposed in Staff Report #4. This Board would govern the two-year branches now in operation and the additional ones to be established. It would transform them, as appropriate, into true community colleges. The second proposal concerns cooperative planning for extension and related services. It is discussed in the following sections of this chapter.

Cooperative Planning of Extension Services

Cooperative planning among the colleges and universities of the State that are interested in maintaining extension services would have many advantages. It would do much to reduce the gaps in the present schedule of extension course offerings. It would also facilitate the elimination of unnecessary or wasteful duplication in extension services.

Although the present study did not turn up much evidence of objectionable duplication in extension class offerings, the future possibilities of such duplication, and the public suspicion that duplication exists, should be minimized. Through cooperative planning the present evolutionary process, by which what at first starts as a few extension courses finally matures into a full-blown, independent state college, would at least be open to scrutiny by all who are concerned with the orderly development of the State's higher educational facilities.

A cooperative arrangement could usefully explore the possibility of joint course offerings. If two institutions have similar courses, it is possible for a single class to enroll students from both. Thus if 10 students at Franklin wish to enroll in a course in American Government for credit at the University of Virginia and 12 wish the same course for credit at The College of William and Mary, either institution, but not both, might offer the course, with each student enrolling and receiving credit at the institution of his choice. Differences in class fees and credit hours earned pose obstacles to such cooperation, but they can be surmounted. The chief requirement is for joint approval of the instructor. Without this cooperation, neither institution would be justified in offering the course to only a few students.

The benefits of cooperative planning can be achieved easily in another arrangement, if each institution provides for simple transfer of credit. Let all 22 students, in the case just cited, enroll for credit at either of the two institutions, with the assurance that the credit can be readily transferred to the other. This involves a high degree of respect and comity among sister institutions, qualities that some faculties may not possess. The degree to which it exists measures the extent to which a State has really developed a "system of higher education."

The probabilities are that cooperative planning would not be difficult to achieve, despite these obstacles, if there were erected a structure to bring it about. In the area of extension services, as elsewhere, colleges and universities find it easier and more convenient to make unilateral judgments, without spending time and effort on extensive interinstitutional consultation about a host of small details. It is no criticism of the university administrators to point out that they have made decisions only from their own institutional point of view, since the State has provided them no basic policies to guide their judgments.

The allocation of responsibility for extension on a regional (geographic) basis is not a proper solution. Virginia's institutions are of a diverse character. This is an element of strength. Some types of extension offerings cannot be offered by every institution because of the diversity of their campus programs. Cooperative planning would provide the great benefit of exchange of information on proposed offerings, as well as basic guide-lines to help determine which institution should offer what--and where.

Most complaints of duplication seem to be based on fears of future developments. No less than nine colleges and universities offer some college courses in Richmond. But Richmond is a metropolis of large population and with extensive educational needs. Furthermore these needs are widely varied. There may be unnecessary and wasteful duplication in Richmond, though this study indicates that at present duplication is minimal. But it could develop unless the nine institutions find a means for cooperation.

Similarly four institutions offer courses at Petersburg, five at Norfolk, three at Langley Air Force Base, four at Portsmouth, four at Newport News, four at Hampton, and four at or near Roanoke.

The situation at Roanoke merits special mention. The University of Virginia reported that it offered, in 1964-65, a total of 153 courses at its "Roanoke Center," plus 38 more offered by its Extension Division at Roanoke. The Virginia Polytechnic Institute reported some extension courses were offered at Roanoke besides the courses taught at the Roanoke Technical Institute, "a branch of Virginia Polytechnic Institute." Furthermore a private college, Roanoke College located at near-by Salem, offers evening classes on its campus. Hollins College, also near Roanoke, does not maintain evening classes for commuters or other extension services. There is a possibility that unilateral decisions by the universities as regards Roanoke may lead to undesirable conflict and duplication. There is still time for cooperative planning to prevent this.

This may also be true at the Langley Air Force Base. Three of the Virginia universities reported that they offered a cluster of extension courses there in 1964-65; the University of Virginia offered 28 courses, the Virginia Polytechnic Institute 15 courses, and The College of William and Mary 49 courses. These combine to make a substantial college program. While the cost to the State is moderate, consisting chiefly of administrative costs in designing and operating the programs, there might be some economy of effort and coordination of purpose if one institution were assigned the responsibility for the total program.

The College of William and Mary has been officially requested by the Commanding General of the Tactical Air Command at the Langley Air Force Base to establish a "Resident Center" at the Base. The Board of Visitors of William and Mary has approved, and the proposal is currently before the State Council of Higher Education. The proposal states that "the program of studies will consist primarily of basic college courses normally required in the general education area in the first two years of college." This is precisely the sort of program that is always offered by a comprehensive community college. Under the

Board of Visitors of The College of William and Mary, a branch, Christopher Newport College, is operated as a community college at Newport News, with an enrollment of 804 students (Fall, 1964). In addition, extension courses are offered at Newport News by the University of Virginia and Virginia State College. Courses are also offered at Hampton. All these facilities are within a few minutes by car from Langley Air Force Base, in addition to the extension courses offered at the Base.

The proposal for a "Resident Center" at Langley Air Force Base seems of the sort that ought to be studied by some state-wide agency responsible for the cooperative planning of extension services.

One suggested device for promoting cooperative planning in this field is described below. It is simple and non-revolutionary. It could be promptly effected without the need for legislation. It is similar to procedures used in some of the other states.

A Proposal - for an Extension and Public Services Advisory Committee

There should be established an Extension and Public Services Advisory Committee to the State Council of Higher Education for the purpose of providing reliable information concerning the extension and public services offered to the citizens of the State and for the purpose of assisting the Council and the colleges and universities in achieving a rational pattern of these services. The Advisory Committee would have no authority to fix institutional policies in regard to extension and public services, but would be expected to review or formulate proposals and recommendations, which would be presented to the State Council of Higher Education and to the various state-controlled colleges and universities. While its membership would come only from the state-controlled institutions, it would seek to gather pertinent information from the privately controlled colleges offering extension and public services programs, so that as much cooperation as possible can be achieved.

It is proposed that this Advisory Committee consist of one representative from the staff of the State Council of Higher Education, and one representative from each state-controlled institution that has its own Board of Visitors. At present, the institutions represented would be:

The College of William and Mary
Longwood College
Madison College
Medical College of Virginia
Old Dominion College
Radford College
Richmond Professional Institute
University of Virginia
Virginia Military Institute
Virginia Polytechnic Institute
Virginia State College at Petersburg

These persons would be appointed by the Boards of Visitors of the respective institutions on recommendation of the institution's president. Institutional members of the Advisory Committee should serve terms of at least three years. The persons chosen for membership need not be, and in some cases, perhaps, ought not to be, those directly involved in the administration of extension programs. Such administrators might well serve on *ad hoc* technical sub-committees, which would be created as needed at the discretion of the Advisory Committee.

The chairman of the Advisory Committee should be a professional staff member of the State Council of Higher Education. This arrangement would insure the fullest possible sharing of information and plans among all the participants. The State Council of Higher Education should provide staff service for the Advisory Committee.

The Advisory Committee should be empowered to give attention to any of the topics falling within the range of extension and public services. These include:

1. Off-campus courses for credit
2. Non-credit courses--on or off-campus
3. Conferences, forums, seminars
4. Correspondence courses
5. Television instruction--broadcast or closed circuit
6. Special institutes with off-campus activities
7. Adult education generally
8. Other off-campus services

The expenses of committee members to attend meetings, etc., should be borne by the respective institutions. At least three meetings each year should be held. Cost of publishing necessary reports of the Committee should be borne by the State Council of Higher Education. One initial task for the Advisory Committee might be the development of meaningful financial reports of these services and the gathering of comparable enrollment data. This information would make it possible for the Advisory Committee to propose appropriate budgetary support for the operation of extension services. The organization of the proposed Extension and Public Service Advisory Committee could probably be accomplished by the State Council of Higher Education under its existing statutory authority. Perhaps specific legislative approval of the establishment of the Advisory Committee should be sought, however, inasmuch as the statute creating the State Council of Higher Education is somewhat vague about its authority for the coordination of extension programs.

CHAPTER III

SPECIALIZED INSTRUCTIONAL SERVICES

Evening or Saturday Students

The colleges and universities also extend their services to students that are unable to enroll for full-time college work by offering courses during the evening hours and on Saturdays. These courses are taught at times that make it possible for persons in full-time employment to take one or two courses and, in some cases, to manage in a space of 8 or 10 years to acquire most of the credits needed for a four-year degree. In addition, graduate courses are offered for teachers and other professional persons so that they may qualify for improved professional status and advanced degrees. Late afternoon, evening, and Saturday scheduling also raises the level of utilization of the physical plant and equipment. Table 7 shows pertinent data about evening and Saturday classes for part-time students.

A dozen Virginia institutions, including most of the state-controlled four-year colleges and universities, reported that they offer classes for part-time students in evenings and on Saturday. The most extensive programs were those of Richmond Professional Institute, Virginia State College at Norfolk, Virginia Polytechnic Institute, and The College of

Table 7. CLASSES TAUGHT IN EVENING OR SATURDAY CLASSES ON CAMPUS (STUDENTS OTHER THAN ENROLLED IN DAY SCHOOL), 1964-65

Institution	Number of Courses	Number of Courses at Each Level				Total Enrollment	Average Enrollment per Class
		Non-College	Lower	Upper	Graduate		
State-Controlled 4-year							
The College of William and Mary	73	-	15	27	31	948	13.0
Medical College of Virginia	4	-	-	-	4	26	6.5
Old Dominion College	22	22	-	-	-	733	33.3
Richmond Professional Institute	460	23	243	175	19	8,368	18.2
University of Virginia	48	23	20	2	3	799	16.6
Virginia Military Institute	-	-	-	-	-	-	-
Virginia Polytechnic Institute	77	10	17	40	10	1,460	18.7
Virginia State College-Pet'g.	8	2	1	5	-	219	27.4
Virginia State College-Norf.	138	42	66	30	-	2,009	14.6
State-Controlled 2-year							
Roanoke Technical Institute	21	7	14	-	-	377	17.9
Total	851	129	376	279	67	14,939	17.6

William and Mary. The last mentioned institution had the largest number of graduate classes in the evening and Saturday program. Institutions located in a large urban center commonly have more extension programs of evening classes than those located in small towns; the two Virginia institutions with the largest evening school enrollments are located in Richmond and Norfolk; the enrollments reported for Virginia Polytechnic Institute include evening students at its branch college in Roanoke.

In some cases the volume of evening courses is sufficient to justify their organization into an "Evening College," in others they are treated as part of the regular schedule. In some respects they are similar to extension courses and are frequently administered by the Extension Division.

Faculty are recruited to teach the evening courses from a variety of sources. In some cases the instructors are regular faculty members of the institution teaching the courses as part of their regular load, ("released time plan"), or being paid extra for the extra load, ("bonus payment"). The former method is sounder in theory, since it avoids over-loading of staff, but in practice the latter is more expedient in that it eases recruitment of staff and otherwise facilitates administering the program. Many institutions use both methods in part.

In addition, faculty members are recruited from other institutions, both public and private, from faculties of high schools, and from professional persons not employed in an educational enterprise.

Accountants, engineers, lawyers, social workers, business executives, nurses, and other professional people often possess the particular competence to teach a particular course. Scores of them are used by colleges and universities as instructors for evening classes.

In some states, colleges have greatly extended their late afternoon and evening programs by offering virtually a full range of courses at the lower division level, between 4 p. m. and 10 p. m. on weekdays. Commuting students who apply for registration late, after regular daytime classes are filled, are informed that they can be admitted, but will have all their classes after 4 p. m. Separate faculties are employed for these classes. While the plan has some disadvantages, it has been useful in general studies programs for freshman-sophomore students. Many junior colleges in other states operate almost wholly in this fashion. The plan has the salient advantage of increasing the level of space utilization. Thus far, it appears that no Virginia institutions have felt constrained to adopt a full-scale evening operation for regular college students.

Short Courses and Institutes

Under the general heading of specialized extension services there are a variety of "short courses", "institutes", conferences, seminars, and other non-credit enterprises. These all have some element of instruction and are rightly a part of the public service activities of the college or university, albeit not of the traditional character associated with the "ivory tower" concept of higher education. Publicly supported institutions have a special obligation to serve the citizens of the State in a variety of ways. So it is not surprising to find, as shown in Tables 8 and 9, that most of these services are being rendered by the state colleges and universities.

It is not particularly meaningful to tabulate these services in a statistical form. Virginia Polytechnic Institute alone reported 11,251 short courses held on or off the campus, enrolling a total of almost 350,000 persons. Another 160,000 attended some 1,500 conferences or forums. These totals reflect the broad services of the Cooperative Extension Service in all the counties of the State. Virginia State College also served several thousand citizens in similar programs. Urban institutions, such as Old Dominion College and Richmond Professional Institute also served thousands of persons in this informal fashion. Old Dominion College also offers a labor-management program for industry and labor leaders, as does also the University of Virginia.

The reports indicate that Virginia institutions have not neglected their task of serving a wide constitutency throughout the State through

Table 8. SHORT COURSES OR INSTITUTES FOR SPECIAL GROUPS, 1964-65

		On-Campus		Off-Campus		
Institution	Number of Courses Held	Number of Courses	Total Attendance	Number of Courses	Total Attendance	Number of Locations
State-controlled 4-year						
Wm. & Mary	18	18	277	-	-	-
Med. Col. Va.	Not Available					
Old Dominion	9	8	452	1	67	2
Rich. Prof.	53	28	1,243	39	1,039	52
Univ. of Va.	25	10	506	15	365	18
Va. Mil. Inst.	12	9	1,107	3	265	2
Va. Poly. Inst.	11,251	147	7,166	11,104	342,311	2,275
Va. St., Pet'g.	21	21	1,445	-	-	-
Va. St., Norf.	35	23	91	12	455	10
Privately Controlled 4-year						
No. 23	1	-	-	1	37	1
No. 10	6	6	27	-	-	-
No. 14	11	9	163	2	14	1

Table 9. CONFERENCES OR FORUMS FOR SPECIAL GROUPS, 1964-65

Institutions	Conferences/ Forums Held	On-Campus		Off-Campus		Number of Locations
		Number of Programs	Total Attendance	Number of Programs	Total Attendance	
State-Controlled 4-year						
Wm. & Mary	37	37	5,950	-	-	-
Med. Col. Va.	55	9	498	46	35	9
Old Dominion	65	65	365	-	-	-
Rich. Prof.	29	26	1,500	3	95	3
Univ. of Va.	15	15	2,204	-	-	-
Va. Mil. Inst.	1	1	100	-	-	-
Va. Poly. Inst.	1,485	266	6,509	1,219	152,159	3,170
Va. St., Pet'g.	35	34	4,999	1	50	1
Va. St., Norf.	6	6	1,415	-	-	-

these short courses and similar non-credit conferences. The need for such programs is certain to expand. The complex problems of urban areas, for example, indicate the need for specialized training programs in a great variety of areas. To insure that these needs are, in fact, being met, as well as to avoid any unnecessary and costly duplication, a periodic inventory of the services should be compiled. This could become a part of the responsibility of the Extension and Public Services Advisory Committee suggested in this Report.

Correspondence Study

Home-study by correspondence is an accepted form of academic activity. It has been developed by numerous colleges and universities throughout the nation. It has certain obvious limitations with respect to the courses and fields of study which lend themselves to this procedure. Laboratory courses in science cannot be taught readily by correspondence, nor can courses which require close and constant supervision of the student's work by the instructor, e. g., creative art and applied music. It is probable, on the one hand, that some of the newer instructional materials, such as foreign language recordings, visual materials, etc., may extend somewhat the range of subjects that can be taught through correspondence study. On the other hand, the growth of instruction through television, which has great advantages over correspondence study, and continued advances in programmed self-study courses, will probably militate against any major growth in the correspondence study operations.

Three Virginia institutions of higher education offered courses by correspondence during the 1964-65 academic year. Two of these are state-controlled institutions, the University of Virginia and Virginia State College at Petersburg, and one is privately controlled. Table 10 shows the number of courses, the enrollments, and the fees charged in the correspondence study program of these three institutions. Table 11 shows the subjects in which each institution offers correspondence courses.

The University of Virginia offered by correspondence 47 credit courses and one non-credit course, in some 15 different subject areas, with a total of 546 students enrolled. Virginia State College offered 14 credit courses and one non-credit course, in 9 different fields, with a total of 141 active enrollments. The privately controlled college offered 5 different credit courses, all in the field of Bible and religion, with 46 active enrollments.

Home-study, by correspondence or by television, is a useful means of raising the educational status of adults and should be encouraged. It is particularly useful to persons living in isolated areas or who are confined to their homes. It is not known how many Virginia citizens are

Table 10. VIRGINIA INSTITUTIONS OFFERING CORRESPONDENCE STUDY COURSES, 1964-65--COURSES, ENROLLMENTS, FEES

Institution	Number of Courses Offered		Total Active Enrollments						Usual Charges to Students per Course		Over-all Active Enrollments per Course
			Men		Women		Total				
	Credit	Non-credit	Credit	Non-credit	Credit	Non-credit	Credit	Non-credit	Credit	Non-credit	
State-Controlled 4-Year											
Univ. of Va.	47	1	190[a]	-	356[a]	-	546[a]	-	$36	$16	11.4
Va. St., Pet'g.	14	1	60	1	74	6	134	7	$30	$20	8.9
Privately Controlled 2-yr.											
No. 21	5	-	22	-	24	-	46	-	$39	-	9.2

[a] Not distinguished by credit

Table 11. SUBJECT FIELDS IN WHICH VIRGINIA INSTITUTIONS OFFERED CORRESPONDENCE STUDY COURSES, 1964-65

Subject Fields	Univ. of Va.		Va. St., Pet'g.		No. 21	
	Credit	Non-credit	Credit	Non-credit	Credit	Non-credit
Bible and Religion	X	-	-	-	X	-
Business & Commerce	X	-	-	-	-	-
Economics	X	-	-	-	-	-
Education	X	-	X	-	-	-
English	X	-	X	X	-	-
Geography	X	-	X	-	-	-
Gerontology	-	X	-	-	-	-
Health & Phys. Educ.	X	-	X	-	-	-
History	X	-	X	-	-	-
Home Economics	-	-	X	-	-	-
Library Science	-	-	X	-	-	-
Literacy Education	X	-	-	-	-	-
Mathematics	X	-	-	-	-	-
Philosophy	X	-	-	-	-	-
Political Science	X	-	-	-	-	-
Psychology	X	-	X	-	-	-
Sociology	X	-	X	-	-	-

currently engaged in home-study, for many are undoubtedly enrolled in correspondence courses offered by out-of-state institutions. Extensive programs of correspondence study are conducted by institutions in New York and Chicago, and by state universities in many states, and are advertised in national publications. There may be large numbers of Virginia residents enrolled in these programs. This may account for the fact that a relatively small number, a total of 733 persons, were enrolled in 1964-65 in the correspondence courses offered by Virginia institutions.

The chief limitation on the success of correspondence study is the difficulty of maintaining student interest and motivation. Attrition is likely to be heavy among students enrolled in correspondence courses. Frequently a considerable time elapses between enrollment and completion of the course. Many students never complete the entire course for which they register and pay fees.

As a rule, correspondence courses are completely self-financing. The fees charged are about the same as for regular residence courses. Instructors who give the correspondence study courses are normally members of the regular faculty, and are paid extra for this service. Usually the institution pays a relatively modest flat fee to the instructor who first organizes and outlines the lessons for a correspondence study course. Then a fixed amount, also rather small, is paid the instructor for each lesson, submitted by a student, that is graded and returned to him. As previously noted, there is a high rate of non-completion of correspondence by students who enroll in them, but refunds of fees are normally not made to a student who discontinues after sending in the first few lessons. Thus the maintenance of a correspondence study program commonly does not require any subsidy from state appropriations or other non-student sources.

Practically all colleges and universities place a rather strict limit on the amount of credit, earned in correspondence study, that can be applied toward a degree. Normally correspondence study credits are accepted by transfer from any other accredited college or university, up to the institution's limit for degree purposes, though some institutions will accept by transfer only courses that are similar to those which it offers itself in the residence program.

It will be noted from Table 10 that the subjects offered by correspondence at the University of Virginia and Virginia State College are very much the same. Subjects offered only at Virginia State College, and not at the University of Virginia are home economics, library education, and non-credit English. Table 10 also shows that the volume of active enrollments per course is smaller at Virginia State College than at the University of Virginia. This might raise the question of the need for two institutions in Virginia to offer correspondence courses in the seven fields in which both now offer courses. Since no state funds are involved, the question is one for decision by the institutions concerned, since the principal issue is the best use of faculty time and energy.

Except as some unusual courses may be included in their programs, the Virginia institutions offer no unique or indespensible service to the State's citizens in maintaining correspondence study. The availability of correspondence courses to any citizen is measured only by the distance to his nearest mail box, and there are scores of colleges and universities throughout the country that are eager to serve correspondence students in any state.

Perhaps the chief advantage of having at least one institution in Virginia with a program of correspondence study is the opportunity for publicity that will stimulate adults to continue their education by this method. Correspondence courses are also sometimes justified on the basis of the opportunity they afford to regular campus students to complete a course which, for some reason, they have not been able to finish while in residence. In general, the issue of the continuation of the present programs of correspondence study in the Virginia institutions is not an important one, and decisions can best be left to the faculties and governing boards of the institutions. There seems to be no need at present for any other state-controlled institutions in Virginia to embark on correspondence study programs.

CHAPTER IV

INSTRUCTION BY TELEVISION

Educational television for college-level instruction has not yet been used extensively in Virginia. Thus far, the emphasis has been on the production and transmission of courses for the elementary and secondary schools. At least 74 courses, designed for the kindergarten through high school years, were offered in 1964-65 in Virginia and served several hundred thousand pupils. The Virginia Advisory Council on Educational Television has compiled a comprehensive catalogue of these offerings and has done much to stimulate their use. The classroom teachers who have made use of television facilities have generally given them strong endorsement.

At the time data were gathered for the present Report, the institutions of higher education in Virginia had not made use of broadcast educational television for instruction in credit courses. In 1965-66, however, there will be a number of in-service classes for teachers, some of which will carry college credit. A course for teachers in modern elementary mathematics will be offered by WCVE-TV, with credit to be given by Richmond Professional Institute. WHRO-TV will also provide a mathematics course with credit to be given by Old

Dominion College.

The present study of higher education in Virginia is limited to the use of closed circuit television as an instructional technique in connection with regular college courses, and the extent of facilities in the Virginia institutions of higher education for closed circuit transmission and reception. An inquiry form was sent to each college and university in the State, requesting information about the facilities for closed circuit television and the courses in which this instructional medium was being used in 1964-65. None of the two-year colleges and none of the privately controlled four-year colleges reported the use of closed circuit television for instructional purposes. The information furnished by the four-year state-controlled insitututions is summarized in Table 12.

Only five of the four-year state-controlled colleges and universities in Virginia reported that they have facilities for closed circuit television in any of their classrooms and laboratories constructed since 1960. The College of William and Mary reported 11 classrooms equipped to receive closed circuit television but that they were not used in this manner in the 1964-65 school year.

The Medical College of Virginia reported 16 rooms equipped for closed circuit television, and that they were all used extensively for a total of some 289 hours in 1964-65. The television programs, taped

Table 12. CLOSED CIRCUIT TELEVISION COURSES OFFERED IN VIRGINIA'S STATE-CONTROLLED INSTITUTIONS OF HIGHER EDUCATION, 1964-65

Institution	Buildings Constructed since 1960 that receive Television	No. of Classrooms with Closed Circuit Facilities	Number of Courses	Total Credit Value	Enrollment	Sources		No. of Programs for Course	Minutes Each Period (Average)	Length of Course in Weeks
						Live	Video-Tape			
State-Controlled										
4-year										
Wm. & Mary	b	11	None[d]	-	-	-	-	-	-	-
Longwood	b	15	5	15	778	All	-	128	50	80
Madison	a	20	2	10	230	All	-	52	50	48
Mary Wash.	None	None	None	-	-	-	-	-	-	-
Med. Col. Va.	All	16	281[c]	-	-	Some	Some	281	-	-
Old Dominion	None	None	None	-	-	-	-	-	-	-
Radford	None	None	None	-	-	-	-	-	-	-
Rich. Prof.	None	None	None	-	-	-	-	-	-	-
Univ. of Va.	None	None	None	-	-	-	-	-	-	-
Va. Mil. Inst.	None	None	None	-	-	-	-	-	-	-
Va. Poly. Inst.	None	None	None	-	-	-	-	-	-	-
Va. St., Pet'g.	a	6	4	12	157	All	-	20+	50	72
Va. St., Norf.	None	None	None	-	-	-	-	-	-	-

[a] Some provision in each new building.

[b] Some provision in some new buildings, but none in others.

[c] Both closed circuit and broadcast.

[d] Have facilities, but not in use in 1964-65.

or live, at the Medical College of Virginia were used only to supplement the regular instruction and not as the major teaching device. The Chairman of the Department of Visual Education at the Medical College wrote: "We never have, and I hope never do, given a course by closed television alone."

Courses are designed for and offered by closed circuit television at Madison College, Longwood College, and Virginia State College-Petersburg. At Madison College some 20 rooms are equipped for reception: two different credit courses were offered to some 230 students. One of these courses was in General Physical Science, a subject believed to be especially suitable for television instruction. Here, as was the case also at Longwood College and Virginia State College-Petersburg the course lectures are broadcast live and were not recorded.

At Longwood College, where 15 classrooms are equipped for closed circuit television, five different credit courses were offered in psychology and public speaking. A total of 778 students received some 128 live broadcasts. At Virginia State College-Petersburg, six classrooms were used to offer three different credit courses to some 157 students. In addition, the entire freshman class witnessed a series of 7 telecasts designed for freshman orientation. This topic, which includes such aspects as the use of the library, how to take notes, how to study, proper dress, etc., is especially suitable for television presentation.

It is likely that the use of television for instruction will continue to grow in Virginia and throughout the nation. The Southern Regional Education Board has an educational television project of some years standing, and has recently received an additional grant to develop procedures for interinstitutional cooperation in its use. State-wide networks for educational television are already operating in several southern states. Virginia already has the Central Virginia Educational Television Corporation (WCVE-TV, Channel 23), the Hampton Roads Educational Television Association, (WHRO-TV, Channel 15) and the Greater Washington Educational Television Corporation, (WETA-TV, Channel 26).

The Virginia Advisory Council on Educational Television has outlined a plan for additional channels and for state-wide coverage. It also co-sponsored a Seminar on ETV in Higher Education, which was attended by representatives of 38 Virginia colleges and universities. Some of the specific uses of educational television in colleges and universities were discussed. These include:

1. College credit courses.--Some of these have been offered on a nation-wide broadcast, and the credits accepted by numerous institutions. Other courses have been broadcast by local stations or through

closed circuits. It has generally been found useful, in addition to the television, to have a number of meetings of the students with qualified faculty members for discussion and explanation of the subject and for competency examinations.

2. Non-credit courses for college students and the general public.--The use of television for orientation courses for college students has been noted above. There is also a very large audience among housewives and other citizens, who wish to receive non-credit instruction in such fields as literature, foreign language, history, current issues, the fine arts, etc., through broadcast educational television.

3. Supplementary instruction.--Television can be used in enriching instruction in science, the humanities, the social sciences, and in other fields. Closed circuit use is particularly appropriate for this purpose.

4. Public information.--Certain occasions occur in higher education, which ought to be shared with the citizens of the State and which are not broadcast by commercial stations, perhaps because of their time of day or their length. Convocations and other academic gatherings, intellectual discussion and debate, and other highlights of the academic year could be broadcast through television to a wide audience.

In the whole development of educational television, cooperation is essential. The costs of producing high quality programs are very great and ought to be shared. This can be done through the use of video-tapes or by the network of stations for simultaneous live broadcasts. Unnecessary duplication of effort in this field is so wasteful as to be inexcusable. The State ought to provide the machinery that will insure the cooperation of all institutions.

At present in Virginia educational television is a regional operation. There is no state-wide, coordinated system of educational television broadcasting, and no linkage, by coaxial cable or microwave towers, of the regional broadcasting centers. The one in northern Virginia is set up to serve not only that part of the State but also the District of Columbia and nearby areas of Maryland. Several areas of Virginia are not covered by the present regional set-up of facilities.

A number of states have found it advisable to set up complete coverage of their area through a coordinated system of educational television stations. The initial cost for such a state-wide system is rather large, and the economics of educational television come chiefly in the advantage of superior teaching that the medium affords students. A first class video-tape is an excellent instructional device, as has been shown by extensive research. Television instruction has the interesting side effect, especially noted in the elementary schools, of improving the classroom teacher's performance also. Teachers seeing the interest that pupils take in the picture on the TV screen are encouraged and challenged to try to match that in their own teaching after the television reception has been finished.

The advantages of a state-wide, coordinated educational television system in Virginia would be felt chiefly in the instructional programs at the elementary and secondary school level. With the improvement now under way in the quality and scope of available video-tapes, it is conceivable that before long it would be feasible also to offer at least half the instruction of the freshman and sophomore years of college through a State educational television system. New college buildings should, without fail, be equipped for the reception of both broadcast and closed circuit television, for this medium of instruction will undoubtedly begin to play a large part in the development of instruction at the college level in a very few years. The Virginia Advisory Council on Educational Television should be encouraged to develop plans for the extended use of television for instructional purposes in the State's institutions of higher education.

CHAPTER V

RESEARCH

The primary functions of a university are usually defined as instruction, research, and public service. Actually all three of these functions are intertwined. Instruction at advanced levels without research is barren. Research itself may be wasteful if its findings are not disseminated through the classroom and to the entire society.

Research is particularly essential for institutions concerned with graduate work. The search for new knowledge is a necessary adjunct to advanced teaching. Those engaged in disseminating advanced knowledge are those most likely to recognize gaps in that knowledge, especially with the help of alert students who are inclined to ask searching questions.

This Report is concerned with three kinds of research; (1) institutional, (2) departmental, and (3) sponsored. Each will be discussed in turn. In a fourth section of the Chapter attention will be given briefly to research organizations in Virginia that are not integral parts of institutions of higher education.

Institutional Research

Institutions of higher education need to know a great deal about themselves. Industrial concerns in recent years have frequently allocated from 2 to 5 per cent of their total expenditure to "research and development."

One large and well known company uses as its motto "Research is the key to the future." Higher education, confronted by the urgent problems inherent in rapidly expanding enrollments and the explosion of knowledge, needs to look at itself with great care if it is to use its resources wisely and with maximum effectiveness. Throughout the country many major institutions of higher education have recognized the need for research on their own problems of operation. Many have established offices of institutional research or agencies with similar responsibilities. In fact, there is an embryo profession of analysts in the problems of higher education, who meet in an annual national conference to exchange information and examine techniques.

The survey staff submitted inquiry forms to the Virginia colleges and universities which asked specifically for information concerning institutional research. This area was defined as "research directed toward the problems of the institution's own operations, definitely organized in a bureau or a definite responsibility of some official (s), and supported by regular institutional funds." The information reported by the institutions which have some institutional research activities is summarized in Table 13.

Of Virginia's state-controlled institutions only the University of Virginia reported that it has set up such an agency with a specified annual budget. It is called the "Office of Institutional Analysis." It has

Table 13. VIRGINIA INSTITUTIONS HAVING INSTITUTIONAL RESEARCH PROGRAMS, 1964-65

Institution	Institutional Funds Used on Problems Related to Institutional Operations	Titles of Offices or Agencies Responsible	Annual Budget
State-Controlled 4-year			
Madison	yes	Commission on Research	$ 1,500
Univ. of Va.	yes	Office of Inst. Analysis	$20,208
Va. Mil. Inst.	yes	Registrar; Administrative Assistant to Dean	included in Registrar's fund
Va. Poly. Inst.	yes	-	not specified
Va. St., Pet'g.	none for 1964-65	Assistant to President in Special Activities	depends on need
Va. St., Norf.	yes	Business and Provost Office	$13,000
Privately Controlled			
No. 22	yes	Subdivision of Registrar	$10,000
No. 17	yes	President	not specified
No. 19	yes	Chairman, College Research Council Comm.	$ 3,000

an annual budget of $20,208. Virginia State College at Petersburg provides variable funds for this purpose to the "assistant to the president in special activities." At Virginia State College at Norfolk, the business office and the provost share this responsibility. At Virginia Military Institute the work is done by the registrar and the administrative assistant to the dean. None of the privately controlled colleges reported an agency for this purpose.

Whether there is a specified agency or not, some of the work of institutional analysis is generally carried on. Frequently much data-gathering is conducted by the registrar of the institution; other information is assembled by the provost or dean of instruction as well as by the business office. In some cases the president designates an administrative assistant to gather and interpret some kinds of information. Where institutional research is dispersed in several offices within a college or university, there is need for coordination to avoid duplication and confusion resulting from lack of comparability. Centralization of responsibility also promotes the orderly, on-going studies of institutional concern. Numerous questionnaires reach each institution from accrediting bodies and from federal, state, and private agencies. Accurate and consistant responses to these are facilitated by the existence of an institutional research agency.

The colleges and universities of Virginia have made only a very modest beginning in the provision of institutional research offices, and relatively little budgetary support has been provided for this service where it has been instituted. To some extent the Virginia State Council of Higher Education can serve as the agency for research studies that should involve all the state-controlled institutions. A beginning has been made by the Council in the area of space utilization studies; the program might be extended to include continuing studies of several areas that have been the subjects of special Staff Reports in the present Study of Higher Education in Virginia.

It is inevitable that the need for institutional self-analysis will grow, and a clear-cut allocation of funds for the services should be provided. The funds needed to support these services are not large. Much of the usefulness of the service depends on the competence of the staff employed and the extent to which its responsibility is clearly and thoughtfully defined.

Departmental Research

Departmental research is that research which is carried on in various academic departments on problems related to their own disciplines, usually on the initiative of faculty members, and with support chiefly from institutional funds. In one sense it is inseparable from the function of instruction, for the tradition is that scholarly activity involves the constant pursuit of truth as well as the dissemination of knowledge. Many institutions consider instruction so closely identified with departmental research that they treat the two functions as a single budgetary item. This is especially the case where faculty members are granted no reduction in teaching load, and often when they are granted a somewhat reduced teaching load, in order that they may have time for substantial research projects. The present inquiry requested the colleges and universities to report only on departmental research that is "financed by specifically budgeted allotments of institutional funds." Eight of the state-controlled institutions reported such allotments, although they were of substantial amounts only at Virginia Polytechnic Institute, the University of Virginia, and Old Dominion College.[1] The eight institutions reported a grand total of $4,823,416 expended for departmental research, with 236.1 full-time-equivalent faculty members being involved.

At Virginia Polytechnic Institute a total of $4,277,600 was reported as having been spent in 1964-65 on departmental research supported by budgeted institutional funds. These projects involved 34 different departments, and faculty manpower to the extent of 209.6 full-time-equivalent faculty members. Practically all the departmental research carried on at Virginia Polytechnic Institute was in subject fields that are traditional for the land-grant college program.

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[1] No report was received from the Medical College of Virginia.

At the University of Virginia a total of $477,866 was reported as having been spent in 1964-65 with 11 departments participating. Some of these have the character of specialized bureaus or institutes. These include the Bureau of Population and Economic Research, the Institute of Government, the Bureau of Educational Research, and the Institute for Research in Social Sciences. All told, these quasi-departmental agencies spent $441,468, or 92.4 per cent, of the total funds which the University reported for departmental research. Some funds were used to support special projects, such as $11,568 toward editing the Madison Papers. All told these departmental research assignments took the time of 14.5 full-time-equivalent faculty members at the University of Virginia.

Old Dominion College reported eight departments having been allocated $75,860 for departmental research, of which $35,225 was in the School of Engineering. The total faculty time amounted to 8.7 full-time-equivalent faculty members.

No other state-controlled institution reported that it alloted as much as $15,000 for departmental research. Only two privately controlled colleges reported substantial sums for departmental research. One of these is a highly specialized institution with research as its principal function. The other is a liberal arts college in which a faculty member in each of six departments received half-time grants, and a few others received support for research undertaken during the summer. Total funds alloted at this privately controlled liberals arts college for this purpose totalled $35,875. No two-year institution reported any allotments for departmental research. Total expenditures reported by privately controlled institutions for departmental research were $470,075, and a total of 4.9 full-time-equivalent faculty members were reported involved in these departmental research programs.

There is undoubtedly much more departmental research being conducted in Virginia's colleges and universities than that represented by the totals of $5,293,491 and the 241.0 full-time-equivalent faculty members listed in the reports from all the institutions, both state-controlled and privately controlled. As stated above, in the financial accounting departmental research is frequently commingled with the instructional function; it is often compensated by general reduction of teaching loads, without specific budgetary or accounting allocation. Such a plan fails to differentiate between the faculty members who do a substantial amount of significant research and those who do little or none. Specific allotments for specific research activities can obviate this difficulty and give some assurance that the institutional goal of extending the frontiers of knowledge is, in fact, being achieved. In operating a system of specific allotments, it is desirable that decisions respecting allocations be made on the advice of a faculty committee of competent scholars, broadly based from the various fields of knowledge and possessing superior imagination, curiosity, and receptivity to new ideas.

The plan of specific budgetary allotments for departmental research requires that the institution allocate funds for this purpose in its internal budget. Such funds may be quite modest until the need for more is demonstrated. This plan permits a start toward correcting a serious distortion that has developed in recent years on account of heavy emphasis by the Federal Government on research in the fields of science. It is generally the case that grants are readily available from the Federal Government, and from private agencies, for research in the physical and biological sciences, but funds are less readily available in the humanities, the fine arts, and the social sciences (especially history). It is feared that the continuation of recent trends may result in an undesirable lack of balance, artificially induced, among the fields of study. Research grants, from institutional funds, could properly serve to modify this distortion and even to correct discrepancies among the sciences.

Sponsored Research

Most of the funds which are specifically allocated to research in institutions of higher education today are provided by special appropriations or grants from governmental agencies, foundations, industries, or private persons, for investigation of definite problems as mutually agreed upon by the donor and the institution. Projects supported by grants of this kind are designated as "sponsored research." The information collected from the Virginia institutions concerning their programs

Table 14. SPONSORED RESEARCH PROGRAMS IN VIRGINIA INSTITUTIONS OF HIGHER EDUCATION, 1964-65

Institution	Number of Programs	Average Duration (Months)	Amount of Contracts		FTE Staff Employed 1964-65
			Total	1964-65 Expenditures	
State-controlled 4-year					
Wm. & Mary	30	16	$ 1,193,672	$ 486,492	41.4
Longwood	2	17	11,017	2,250	.4
Madison	2	12	18,335	18,335	-
Mary Wash.	5	4	16,733	9,400	-
Med. Col. Va.[a]	60	not avail.	2,869,844	2,869,844	not avail.
Old Dominion	7	19	115,700	89,806	13.6
Radford	4	18	30,170	3,820	none
Rich. Prof.	Information not available				
Univ. of Va.	108	44	16,788,584	5,511,945	207.3
Va. Mil. Inst.	8	12	101,700	57,800	-
Va. Poly. Inst.	225	16	2,533,364	1,232,974	172.6
Va. St., Pet'g.	1	-	6,750	6,750	.5
Va. St., Norf.	6	22	18,557	12,537	-
Total	458	-	$23,704,426[a]	$10,301,953	43.58
Privately Controlled					
No. 13	2	30	$ 63,000	$ 29,000	2.9
No. 15	1	38	29,233	13,816	1.0
No. 16	2	-	2,500	-	-
No. 11	1	1	-	65,000	1.0
No. 12	1	24	33,678	-	-
No. 18	1	9	6,000	4,800	0.9
No. 20	3	10	26,800	26,800	1.8
Total	11	-	$ 161,211	$ 139,416[b]	7.6[b]
Grand Total	469	-	$23,865,637	$10,441,369	51.18

[a] The figures for the Medical College of Virginia, included in this total represent only the expenditures for one fiscal year.

[b] Two privately controlled institutions not included.

Table 15. TOTALS: DISTRIBUTION OF RESEARCH FUNDS BY AREA AND GRANTOR, 1964

Area	Total Number of Insts. Involved	Total Private Donor and Foundation	Total Industry	Total Federal Government	Total State Government	Total Unspecified	Grand Total
Agriculture	4	$ 30, 969	$ 81, 272	$ 79, 323	$ 27, 464	$ 1, 800	$ 220, 828
Art and Music	4	-	-	-	1, 800	-	1, 800
Education	6	1, 295	2, 000	33, 678	-	-	36, 973
Engineering	4	-	27, 133	342, 751	41, 607	-	411, 491
Home Economics	4	-	77, 500	-	-	-	77, 500
Mathematics	2	-	1, 950	-	-	-	1, 950
Medicine and Health	12	308, 957	140, 345	10, 328, 523	20, 268	24, 432	10, 822, 525
Science	17	233, 702	85, 679	11, 408, 818	108, 198	143, 026	11, 979, 423
Social Science	6	-	-	14, 623	-	-	14, 623

of sponsored research is reported in Tables 14 and 15.

The predominance of sponsored research is evidenced by the reports. Nineteen Virginia institutions reported research grants and contracts totaling several hundred in number, and amounting to a grand total of some $23,704,426. Expenditures from these grants during 1964-65 totaled $10,301,953. By far the largest share of the funds for sponsored research (94 per cent) came from the Federal Government. In the Virginia institutions Federal grants from the Public Health Service and the National Institute of Health supported expenditures of some $4 million in 1964-65, while the Defense Department provided funds for $1.2 million for the same period. The Atomic Energy Commission and the National Aeronautics and Space Administration provided $1.8 million for 1964-65 and the National Science Foundation granted approximately $2 million. State agencies provided just under $200,000 and private donors and foundations more than $500,000.

Among the institutions in Virginia only four, (all state-controlled) expended as much as $100,000 in 1964-65 on sponsored research. The University of Virginia spent $5,511,945 on 108 sponsored projects, almost all sponsored by Federal agencies. The Medical College of Virginia spent $2,869,844, about four-fifths of which came from Federal sources, but $513,729 came from private firms and organizations. Virginia Polytechnic Institute, with the largest number of grants, spent $1,232,974, more than half of which came from Federal sources. The College of William and Mary spent $486, 492 for projects under Federal sponsorship.

Eight other state-controlled institutions spent from $2, 000 to $90, 000 each from grants, chiefly from the Federal Government. Seven privately controlled institutions engaged in relatively small-scale projects totaling about $140, 000.

It should be emphasized that sponsored research is an on-going enterprise. Many of the grants are based on the expectation of continuous study for a period of three to five years. The total value of the grants currently in force in Virginia institutions is almost $24 million. Many of these are subject to renewal for an additional term of years.

It is entirely appropriate that industry and private associations, as well as Federal, state, and local agencies, should turn to the universities and colleges for research studies. Where else is there comparable competence in numerous specialized fields? In addition, the institutions frequently possess the specialized equipment and the operating technicians that are needed to conduct the research. So it is entirely logical for the universities to be asked to undertake research projects.

These activities are also beneficial to the colleges and universities, especially those that enroll substantial numbers of graduate students. Graduate education is generally research-oriented. It is also necessary for most graduate students to have financial assistance. Sponsored research frequently makes it possible to give graduate students part-time employment on meaningful projects while furthering their education. At its best, sponsored research strengthens the graduate program of a university and enhances the intellectual competence of both students and faculty. It is an important component in elevating the stature of those universities engaged in graduate education.

There are, however, some dangers in the heavy involvement of an institution in sponsored research. The distortion which results from its strong emphasis upon the scientific fields has been noted previously. Furthermore, there is danger in that most of the projects are of a practical nature--applied research aiming at a pre-determined narrow result rather than more far-reaching studies in "pure" or "basic" research. Some research contracts originate from the narrow interest of a particular professor and are tailored to make the proposal attractive to the grantor, though the research area is not in line with the general role and scope of the institution's services.

Virginia can be proud of the research activities of its universities. At the same time it is only fair to note that the total Federal research funds received by Virginia institutions are a relatively small percentage of the grand total Federal research grants for the country as a whole. Ability to attract large grants of funds for sponsored research has become a status symbol among American universities. In the main, research funds flow to the institutions where there are capable research people on the faculty. The surest way to attract larger grants of Federal research funds is to maintain faculty personnel with the highest qualifications. Salaries' ceilings have to be high in order to maintain this kind of scholar on the faculty, though considerations other than salary are also important in attracting and retaining on the faculty men and women highly competent in their respective fields of research.

Virginia at present operates under a budgetary plan for higher education which effectively limits the average salary paid the faculty members of each state-controlled institution to the average paid in similar institutions throughout the United States. This plan makes it difficult to pay the few relatively high salaries that are necessary to attract and retain outstanding research scholars on the faculty, inasmuch as the payment of a high salary to a few can be accomplished only by depressing the salaries of all the other faculty members. If it is desirable to retain the present plan of budgetary control over faculty salaries, a rather simple adjustment might be made in the plan. By allowing the exclusion of a small, limited number of the highest salaries (e. g., 2 to 5 per cent of all salaries) in the calculation of the average for institutions engaged in significant research programs, a relatively small additional amount in the salary budget would do wonders in assisting the institutions to build the kind of faculties that will successfully attract large research grants.

Other Research Agencies

An analysis of research in Virginia would not be complete without at least a reference to research programs that are carried on outside the State's recognized institutions of higher education. Many of the industries of the State have extensive programs of research associated with their own operations and products. There is a notable example in Richmond of an independent organization through which research services are provided--the Virginia Institute for Scientific Research. Inasmuch as organizations such as these are not usually recognized as a part of higher education, no attempt was made to collect data from them for the purposes of the Higher Education Study Commission.

The Commonwealth of Virginia has established two agencies whose primary functions are research and the advanced training of research workers--the Virginia Institute of Marine Science and the Virginia Associated Research Council. These two organizations also were not included in the collection of data for the present Study of Higher Education in Virginia, inasmuch as neither of them is on the official list of institutions of higher education in the State. Both are independently organized and receive separate appropriations from the General Assembly. Each is closely associated with one or more of the established institutions of higher education in Virginia for academic purposes. Although no data were collected from these two organizations, the Director of the Study spent half a day visiting the Virginia Institute of Marine Science; he also conferred extensively with the Director of the Virginia Associated Research Council and with some of the interested personnel at the institutions involved in the management of the organization.

The Virginia Institute of Marine Science is located at Gloucester Point on the York River; the location is strategic, for it is convenient to research opportunities in both fresh and salt water. The Institute has substantial physical plant, reasonably well suited for its purposes, though somewhat crowded. It has an outstanding staff of specialists in the various sciences associated with marine life. It not only conducts extensive research programs on problems in those sciences, but also regularly offers a few advanced graduate courses, generally not more than two or three a semester, and it provides facilities and supervision for research by advanced students studying toward a graduate degree in marine biology. The staff members of the Institute who give courses or supervise the research of graduate students hold joint appointments as members of the faculty of The College of William and Mary. The Institute does not confer degrees, but credits earned there are accepted for degrees at The College of William and Mary. The Institute has its own appropriation; The College of William and Mary does not contribute to the budgetary support of the Institute, but benefits by the use of the Institute's staff and facilities. Though the academic program of Virginia Institute of Marine Science is small at present, it is growing, and it is increasingly attracting students and research scholars from a wide area of the United States. The academic and research program is heaviest in the summer months, when field work in marine biology is most feasible. Unquestionably, Virginia Institute of Marine Science is equipped and staffed to make important contributions to the welfare of industries associated with marine life. The support and expansion of the Institute's program are clearly warranted.

The Virginia Associated Research Council is a relatively new organization, headed by the presidents of the University of Virginia, Virginia Polytechnic Institute, and The College of William and Mary. It was organized to take advantage of the opportunity for research in nuclear physics offered by a grant of funds from the Federal Government for the construction of a cyclotron and other valuable equipment, for joint use with the research program at Langley Air Force Base. A high level staff of scientists is being assembled, and the plans are to maintain an extensive research program in nuclear physics. Opportunities are provided for advanced students of each of the three Virginia institutions associated with the project to pursue their studies and research. The support of the project comes chiefly from the

Federal Government. As has been indicated above, the Virginia Associated Research Council is a new organization, not yet in full operation. Some misgiving may be expressed about the tripartite control that has been set up, but the program itself seems to offer a large potential for extending the research facilities available to Virginia's students and scholars in this new field of vital importance to the national welfare.

CHAPTER VI

SUMMARY OF RECOMMENDATIONS AND SUGGESTIONS

For convenience the recommendations and suggestions made throughout this Staff Report are recapitulated in this final summary chapter. They are grouped in accordance with the three main divisions of this Staff Report -- extension services, educational television, and research.

Extension Services

The chief need in Virginia, as regards extension services, is that there be established orderly procedures for formulating state-wide policies and for insuring their implementation. There is still opportunity to establish such procedures.

The present situation is a natural outgrowth of circumstances within the State. There were, and are, great educational needs among the people of the State. Locally controlled community colleges have not yet been established to meet these needs, and the state-controlled colleges and universities have moved in to fill the vacuum thus created. Since the state-controlled institutions acted unilaterally and in the absence of a State plan, it was inevitable that some rivalries would appear, some tensions would arise, and there would be the possibility

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The State of Virginia acted wisely in creating the State Council of Higher Education. One of its responsibilities relates to the promotion and coordination of appropriate extension programs to serve the people of the State. It is recommended that the State Council of Higher Education be provided technical staff assistance in this area and that it assume a larger role than it has had in the past in the formulation and implementation of state-wide policy.

Another study for the Higher Education Study Commission, Staff Report #4, THE TWO-YEAR COLLEGE IN VIRGINIA, recommends the establishment of a system of comprehensive, two-year community colleges in Virginia. That Staff Report also recommends that all publicly controlled two-year post-high school institutions be placed under the supervision of one board at the state level. This consultant's review and analysis in Staff Report #7, of the present complexity of patterns of extension services and organizations in Virginia, with so-called community colleges, two-year branches, extension centers, and other extension services, lends complete support to the recommendations in Staff Report #4. It seems clearly unwise to have the two-year colleges of the State under the management of the various state-controlled universities.

The four-year institutions will need to continue to offer upper division, graduate, and specialized courses in extension. Ideally these should be offered in cooperation with one another and with the community colleges where such institutions exist. These community colleges should be the centers for coordinating all publicly controlled higher education programs in their localities, except in cities in which state-controlled universities or colleges are also located. In local areas where no comprehensive community college is in operation, one or more of the four-year colleges can offer extension classes as needed. When the volume of demand grows to the point that an "extension center" is needed to serve a local area, it is clearly time for that area to establish its own comprehensive community college.

There may be cases where the needs for upper level courses are so great that a new four-year college or an upper division branch of a state university should be established. This step should be taken only following a thorough study and recommendation by the State Council of Higher Education.

Specific recommendations are as follows:

1. Existing so-called community colleges, university branches, and technical colleges should come under the governance of a single State board, as recommended in Staff Report #4.

2. An Extension and Public Services Advisory Committee should

be established under the State Council of Higher Education. This committee would have a member from each of the state-controlled universities and colleges which offer extension work, with a chairman from the staff of the State Council. It would gather information and formulate recommendations to coordinate the extension programs of all the institutions of the State.

3. The State Council of Higher Education, with the assistance of its Extension and Public Services Advisory Committee, should develop concrete proposals to maximize cooperation in the various localities of the State in extension services and other related activities.

4. Existing centers and clusters of extension courses should be studied by the Advisory Committee, and recommendations made to the State Council of Higher Education concerning their status and their coordination with other existing institutions and programs.

5. The state-controlled four-year institutions should be encouraged to expand their offerings of courses on campus during the late afternoon and evening hours and on Saturdays. This is especially appropriate for institutions located in cities of substantial size.

Educational Television

6. The use of closed circuit television should be expanded. All new classroom buildings ought to be equipped for the transmission and reception of class lectures, scientific demonstrations, orientation

instruction, and other instructional programs by television, either live or from video-tapes.

7. Virginia should continue its cooperation with the Southern Regional Education Board in its work relating to open circuit educational television. The Virginia Advisory Council on Educational Television should receive continued support, and the Council should encourage and promote the use of open circuit television in the State's institutions of higher education.

Research

8. Each state-controlled college or university should provide for institutional research, and proper funds should be appropriated and budgeted for this purpose. Those having as many as 3,000 students ought to have at least one full-time professional person with this responsibility.

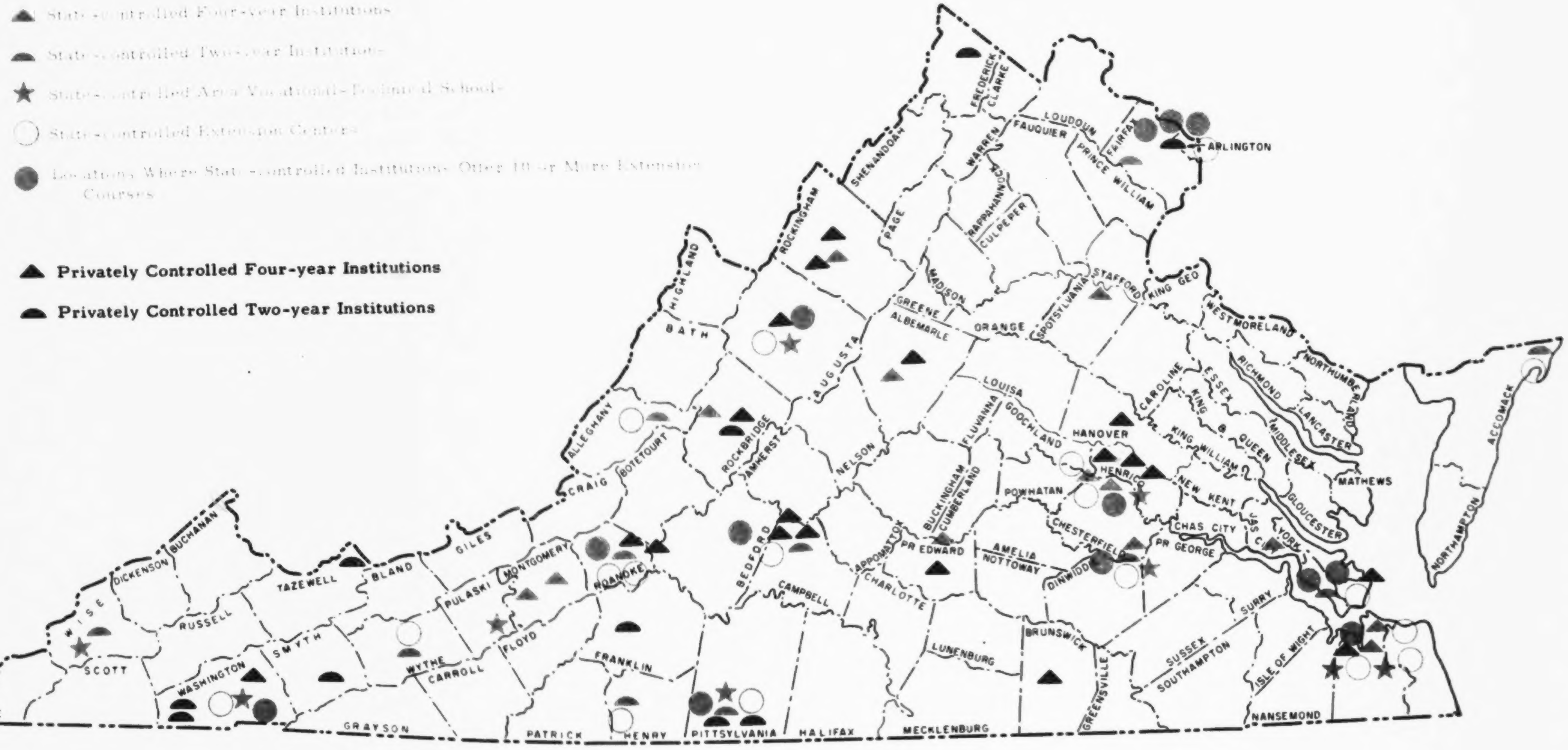
9. Departmental research ought not be blanketed in the budget with instruction through an over-all reduction of faculty teaching loads. The shortage of qualified scholars is so great that colleges can ill-afford justifying standard teaching loads that are relatively light, with the fiction that all faculty members will do significant research. The institution should determine a desirable load

(credit-hour or contact hours of teaching per week) for a full-time teacher in each field of study, and then make to designated faculty members specific allotments (released time and/or grants of funds) for approved research activities. Funds to support this assignment should be specifically budgeted. There should be some kind of an annual audit, preferably at the department level, of the accomplishments achieved under such grants of released time and/or funds for research.

10. Inasmuch as the ability of an institution to attract grants of funds for sponsored or contract research depends on the presence of faculty members who have achieved distinction in research, it is suggested that efforts be made to raise the ceiling for the top salaries in each of the state colleges and universities in which research is an important activity. Perhaps it is important not to disturb the present arrangement for basing the average faculty salary at an institution, for budget purposes, on the average paid in similar institutions in the United States. If so, it should be possible in calculating the average salary for an institution to exclude a small proportion (perhaps 2 to 5 per cent) of the faculty members with the highest salaries, in order to be in a position to offer attractive salaries to a few outstanding research scholars.

MAP 1

LOCATION OF INSTITUTIONS OF HIGHER EDUCATION IN VIRGINIA, LOCATION OF STATE-CONTROLLED EXTENSION CENTERS, AND LOCATIONS WHERE STATE-CONTROLLED INSTITUTIONS OFFER TEN OR MORE EXTENSION COURSES


▲ State-controlled Four-year Institutions
◓ State-controlled Two-year Institutions
★ State-controlled Area Vocational-Technical Schools
○ State-controlled Extension Centers
● Locations Where State-controlled Institutions Offer 10 or More Extension Courses
▲ Privately Controlled Four-year Institutions
◓ Privately Controlled Two-year Institutions
FREDERICK
CLARKE
LOUDOUN
FAUQUIER
FAIRFAX
ARLINGTON
PRINCE WILLIAM
SHENANDOAH
WARREN
RAPPAHANNOCK
CULPEPER
PAGE
ROCKINGHAM
MADISON
GREENE
ALBEMARLE
ORANGE
SPOTSYLVANIA
STAFFORD
KING GEO
WESTMORELAND
NORTHUMBERLAND
RICHMOND
LANCASTER
ESSEX
KING & QUEEN
KING WILLIAM
MIDDLESEX
MATHEWS
GLOUCESTER
CAROLINE
HIGHLAND
BATH
AUGUSTA
LOUISA
HANOVER
GOOCHLAND
FLUVANNA
HENRICO
NEW KENT
CHAS CITY
JAS CITY
YORK
ALLEGHANY
BOTETOURT
ROCKBRIDGE
AMHERST
NELSON
BUCKINGHAM
CUMBERLAND
POWHATAN
CHESTERFIELD
PR GEORGE
AMELIA
NOTTOWAY
DINWIDDIE
CRAIG
GILES
MONTGOMERY
ROANOKE
BEDFORD
CAMPBELL
APPOMATTOX
PR EDWARD
CHARLOTTE
LUNENBURG
BRUNSWICK
GREENSVILLE
SUSSEX
SURRY
SOUTHAMPTON
ISLE OF WIGHT
NANSEMOND
ACCOMACK
NORTHAMPTON
BUCHANAN
DICKENSON
WISE
RUSSELL
TAZEWELL
BLAND
PULASKI
FLOYD
FRANKLIN
SMYTH
WYTHE
CARROLL
WASHINGTON
SCOTT
LEE
GRAYSON
PATRICK
HENRY
PITTSYLVANIA
HALIFAX
MECKLENBURG

ERIC
MAR 1968